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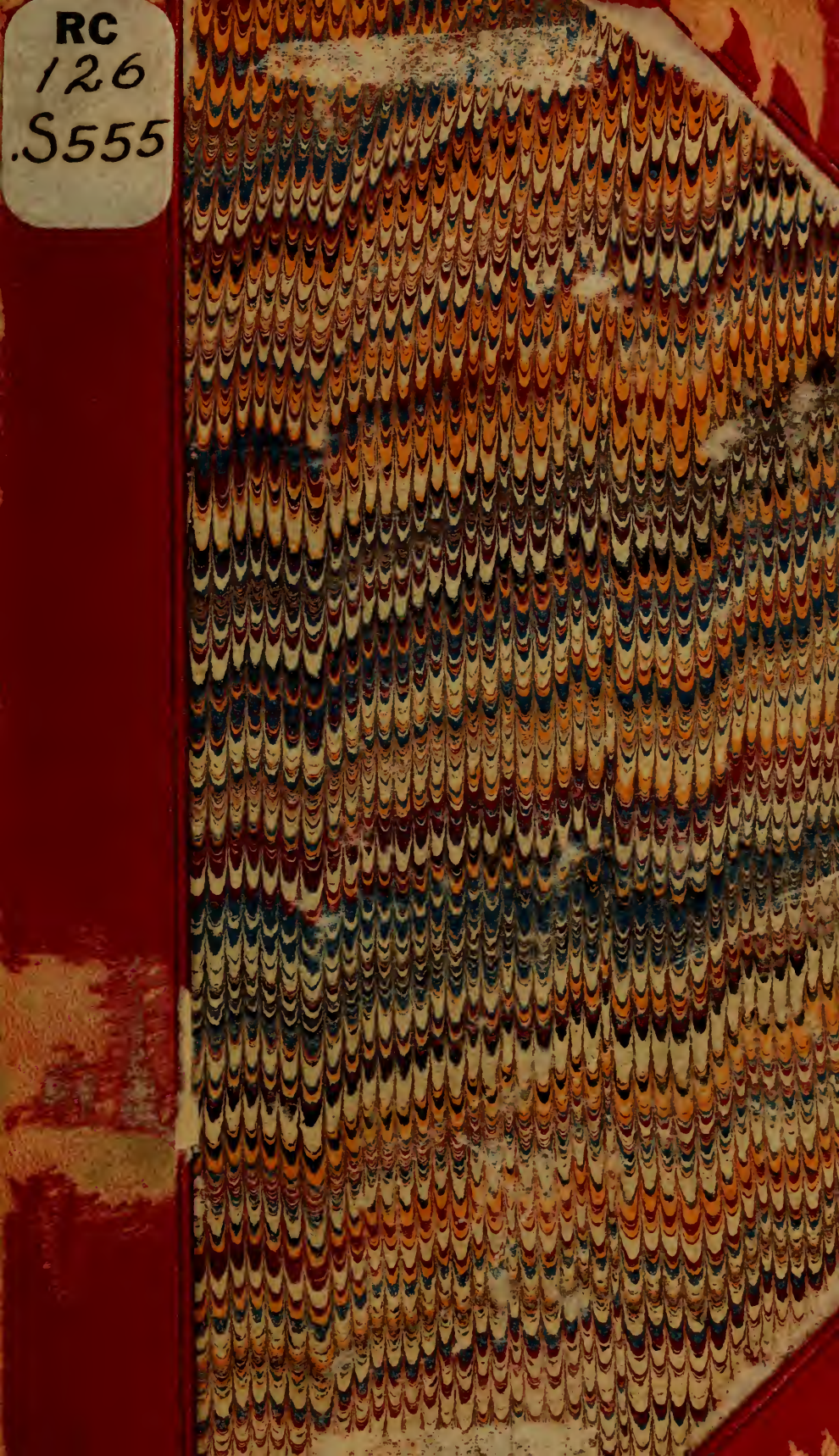

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UNITED STATES OF AMERICA.

THE CHOLERA,

ITS

CAUSES, PREVENTION, AND CURE

SHOWING THE

INEFFICACY OF DRUG-TREATMENT,

AND THE SUPERIORITY OF

THE WATER-CURE,

IN THIS DISEASE

BY JOEL SHEW, M. D.

PRACTITIONER OF THE WATER-CURE, AUTHOR OF WATER-CURE MANUAL, EDITOR OF THE WATER-CURE JOURNAL.

"AN OUNCE OF PREVENTION IS BETTER THAN A POUND OF CURE."

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CONTENTS.

LECTURE I.

Definition of the term "Cholera."—Meaning of "Contagion and Infection."—Is the Cholera a Contagious Disease?—Causes of Cholera.—Fear a Cause of Epidemics.—Anger.—Excessive Grief.—Mental Distress from Want.—Sympathy a Cause of Disease.—Drunkenness and Intemperance.—Prostitution.—Filthiness and Degradation.—Atmosphere and Electricity.—Animal and Vegetable Diet.—Howard, the Philanthropist.—Bible Christians in Philadelphia.—Conclusion. . . . . PAGE 9

LECTURE II.

Recapitulation.—Manner of an attack of Cholera.—Symptoms of Cholera.—First stage.—Second stage.—Stage of Collapse.—Length of time Cholera patients live.—Nature of Cholera—Medical Authority on the Treatment of Cholera.—Dr. Elliotson.—Dr. Watson.—Dr. Marshall Hall.—Dr. Billing.—Dr. Scouttetten.—Dr. J. V. C Smith.—Dr. Wood.—Dr. Dunglinson.—Dr. Mackintosh.—Dr. Condie.—Dr. P. C Tappen.—Philadelphia Board of Health.—Dr. Parkes.—Dr. Broussais.—London Morning Chronicle.—Drs. Bell and Condie on Saline Injection into the Veins and Arteriotomy.—Blood-letting.—Dr. Tappen's Remarks thereon.—Homeopathic Treatment.—Closing Remarks. 42

LECTURE III.

The System of Water-cure; a Picture showing what it is.—Water one of the Leading Constituents of all Living Bodies.—The Human Body composed mostly of Water.—Life may be Sustained for weeks by Water alone.—Facts in proof thereof.—Water assuages Hunger.—Remedial uses of Water.—Animals take to Water when poisoned.—Boerhaave's theory of Fever.—Stimulating practice in Fevers and Inflammatory Diseases wrong.—The cooling Regimen the most natural and the best.—Water the greatest of all Tonics.—Facts from Howard.—Dr. Baynard.—Dr. Hancock.—Dr. Adam Clarke.—Sir John Floyer and Dr. Baynard.—A Fever case.—Cold Water in Scalds and Burns.—Medical authorities on the use of Water in Cholera.—Neglect of Bathing in Medical Practice generally.—Water treatment in Cholera.—Diarrhea preceding Cholera.—How to be Treated.—The great Thirst in Cholera.—Warm Water-drinking.—Cold Water with Calomel.—Cold Water promotes the Circulation.—Hot Water in Cholera.—Vomiting and Discharges from the Bowels.—Warm Water-Injections.—Vomiting by Water.—Injection of Warm Water into the Veins. Hot Applications externally, bad in Cholera.—Spasms, how relieved.—Cold Perspiration in Cholera.—Stage of Collapse.—Priessnitz's Treatment of Cholera.—The Persian Treatment.—Difference between Water and Drug-Treatment.—Conclusion 77

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PREFACE.

On the evenings of the second and fourth of December, 1848, the author gave two lectures, in Clinton Hall, New York, on *The Water-Treatment as a Means of Prevention and Cure of Cholera.* The day after the last lecture, it was publicly announced that the dread disease had already appeared at Quarantine, Staten Island, opposite the city. The lectures were afterward written out at greater length, and have thus made three instead of two. In this form they are now given to the public.

It will strike many, no doubt, as very strange, that the advocates of the old school practice are so at variance on the treatment of cholera. The writer hopes that this little work will do some good, in showing forth the fallacies of the old modes in their true light.

Prevention of disease is the noblest of all medical subjects; and the author is persuaded, that if persons will follow the directions of this work in regard to water-drinking, daily bathing, abstaining from all alcoholic stimulants, tobacco, tea, coffee, and all medicinal substances, at the same time observing a consistent and well-regulated diet—such as brown bread, unbolted wheat or rye mush, good and ripe vegetables and fruits, with a moderate allowance of milk and pure soft water as the only drink—they will find great benefit arising therefrom. Multitudes of people there are in our country, who need just such advice, to enable them to regain that best of all earthly blessings, firm and enduring health.

It is hoped this little work will be especially useful, in teaching people how to prevent disease.

New York, January, 1849.

LECTURES ON CHOLERA

LECTURE I

Definition of the word "Cholera."—Meaning of "Contagion" and "Infection.' —Is the Cholera a Contagious Disease?—Causes of Cholera.—Fear a Cause of Epidemics. —Anger.—Excessive Grief.—Mental Distress from Want.—Sympathy a Cause of Disease.—Drunkenness and Intemperance.—Prostitution.—Filthiness and Degradation.—Atmosphere and Electricity.—Animal and Vegetable Diet.—Howard the Philanthropist.—Bible Christians in Philadelphia.—Conclusion.

DEFINITION OF THE TERM "CHOLERA."

CHOLERA signifies a flow of bile; "cholera morbus," a morbid flow of bile. The term cholera, then, as used in modern times, is not correct, because, in the disease proper, there is no flow or discharge of bile whatever. The entire absence of bile in matters vomited and passed by the bowels, is a characteristic feature of the disease. Cholera, like many other medical terms, is used in a sense directly the opposite of its true and original signification. The term, however, is well understood, and that is sufficient for all practical purposes.

MEANING OF "CONTAGION" AND "INFECTION."

The word "contagion" (from CONTANGO, to meet or touch) signifies, properly, the application of some morbid or poisonous matter to the body, through the medium of touch. A contagious disease is taken by a per-

son coming in contact with another diseased, or by his being, in some mode or other, subjected to the morbid matter passing from the diseased body of the one affected

An INFECTIOUS disease is one the principle of which exists in the atmosphere, without any relation or reference to the bodies of the sick. An infectious disease, then, is taken as easily without coming in contact with the sick as it may be with. If a disease is infectious and not contagious, all quarantine regulations are useless; and, in this case, there is no more danger in attending, nursing, or being with the sick, than in not doing so. This is an important PRACTICAL distinction between contagious and infectious diseases

IS THE CHOLERA A CONTAGIOUS DISEASE?

This is a difficult question to determine, if indeed that be possible at all. It is a "vexed question." Much proof may be brought on both sides. It is very certain, I think, that cholera is not contagious in the same degree as small-pox, and some other diseases. If it were strictly contagious—or, at least, contagious in the same degree as small-pox—it would live perpetually in a city like London, Paris, or New York, and not of itself soon pass away, as it always has done. Besides, many persons have been much among cholera patients—physicians, nurses, and attendants—and yet have not received the disease. Persons have slept with those having the cholera, dressed blisters for them, and nursed them in all manner of ways, remaining with them constantly night and day, and yet have not suffered an attack. We know, therefore that cholera cannot be contagious in the same degree as small-pox, measles, scarlatina, and

the like. Probably all epidemic diseases—diseases that rage, or come upon great numbers at the same time—are, to a greater or less extent, contagious. The bodies of persons suffering with such diseases, doubtless throw off matter that has a tendency to produce the same form of disease in others, whose systems are in a low condition of health.

I believe a large majority of medical writers regard cholera as not a contagious disease.

It appears, generally, that MEN are most subject to cholera, WOMEN less so, and CHILDREN least.

CAUSES OF CHOLERA.

Whether cholera is, or is not, a contagious disease, we know that certain classes of persons are far more subject to it than others; and investigations of this kind are far more useful in a practical view, than those concerning the question of contagion and non-contagion.

Judging from all the facts of cholera, we may lay down the following axiom: *that whatever tends in any way to depress or deteriorate the general health of the individual, must necessarily render the system more liable to an attack;* and, growing out of this, another axiom: *that whatever tends to fortify and establish the general health of the individual, is a natural means of enabling the system to ward off the disease.*

These are self-evident principles, and cannot be too well remembered or acted upon—not only with reference to cholera, but every known malady, and especially diseases of epidemic kind. This being premised, I will proceed to explain some of the more prominent causes of epidemic disease.

FEAR A CAUSE OF EPIDEMICS.

Fear is one of the most prolific among the causes of epidemic disease. It is an old saying, that fear kills more than the plague. "Fear," says Haller, "diminishes the powers of the body, enfeebles the movements of the heart, and weakens the circulation. Influenced by this passion, the scurvy and other diseases become more fatal, putrid and other contagious maladies acquire more malignity, and the body becomes more disposed to be affected by pestilential miasmata."

When a disease like the cholera or the yellow fever comes among any people, the utmost consternation prevails. Exaggerations are multiplied on every hand. The laws of health not being by the many at all studied or understood, and there being, moreover, a general belief that disease is a thing of God's own sending, without any reference to errors in the voluntary habits of the individuals and communities of the race, fear, and fear only, can be the legitimate result. I am acquainted with an intelligent clergyman, who in 1832 was upon the steamboat passing from Quebec to Montreal, when the first case of cholera happened in the latter city. It was sounded abroad in every quarter that the cholera had reached the city. The death took place in the night-time, and in the morning and throughout the day many cases occurred. No doubt now, in this city, the cholera might be caused any day, provided the public could be made to believe that the disease was actually, with all its terribleness, in our very midst. In the spotted fever, or cold plague, as some termed it, that broke out in and spread over a great part of New England, about forty years ago, it

was ascertained that not only delicate females, but the most robust men, and even physicians, fell prostrate and almost lifeless, with all the apparent symptoms of a violent attack of that disease; but which, according to their own subsequent confession, was entirely the effect of fear. And what adds greatly to the mischief in such cases, a great variety of destructive compounds in the way of specifics, elixirs, etc., are swallowed by the multitude, in the old belief that disease is a fixed SOMETHING within the body, which a medicine may be taken to KILL! I repeat, one of the most prolific of all causes of disease is fear. A fable should teach us wisdom in this matter: A pilgrim, meeting the plague going into Smyrna, asked, "What are you going for?" "To kill three thousand people," answered the plague. Some time after they met again. "But you killed thirty thousand people," said the pilgrim. "No," answered the plague; "I killed but three thousand—it was fear killed the rest."

It is to be observed, also, that fear is itself contagious. A person in fear brings those who are about him into the same condition. Suppose a physician, when treating a patient, exhibits fear: what success does he meet with? If nothing worse, a dismissal from the case, as he ought to have. People would much rather die, if die they must, by the side of a strong man, even if he be unskillful, rather than a scientific man, if he be liable to the impression of fear.

There is an opinion with many that physicians "take something," by which they are kept more free from epidemic and contagious diseases. But the truth is, they do not, as a general fact, fear disease as the common people do; and they are, therefore, to say the

least, not more liable than those who are among the sick much less than they are.

"All persons, or at least those who have not uncommon courage and firmness of character," says Broussais, "should avoid the sight of patients suffering with cholera, as there is something very frightful in the contortions of their countenance; and one must be accustomed to attend patients in order to behold with indifference so terrible a spectacle."

In the time of cholera in Paris, in 1832, the royal family, we are told, set a noble example by remaining in the city; and the heir apparent, the lamented Duke of Orleans, made a personal tour of inspection through the hospitals. Casimer Perier (the President of the Council) accompanied him, and "this was an incontestible proof of courage on the part of a man who had carried the seeds of death within him, whose nerves were irritable to excess, and who shuddered at the mere idea of a coffin." He is said never to have recovered from the impression, and died in three weeks afterward.

There is a highly wrought account of the effects of fear in the city of Paris, when the cholera raged with unheard-of violence and devastation in 1832. The deaths at one time were calculated at one thousand and three hundred, to one thousand and four hundred per day. Hearses falling short, artillery wagons were used instead. These having no springs, the violent jolting burst the coffins, and the bodies were thrown out, and the pavements were stained with their blood. The people went mad with terror, believing the wildest fictions, and indulged in the most dreadful atrocities. It was rumored that the deaths were all owing to poison, and that there was no such thing as cholera. Then you

might behold all the horrid secrets of a mode'n civilization, displayed in the rolling billows of a seething population. From those darksome quarters where misery hides its forgotten head, the capital was inundated by multitudes of bare-armed men, whose gloomy faces glared with hate. What sought they? What did they demand? They never told this, only they explored the city with prying eyes, and ran about with ferocious muttering. MURDERS SOON OCCURRED. A Jew was killed because he laughed in a strange manner, and carried a packet of white powder (which turned out to be camphor) in his hand. A young man was butchered for looking into a wine-seller's window, and a coal porter made his dog tear the dead body.*

ANGER

Doubtless is sufficient, in some cases, to cause the cholera. Anger we know causes violent fits of the spasmodic cholic; so, too, it may bring on the cholera in some instances. A state of uniform equableness of temper, feelings, and disposition, cannot be too strongly recommended, as a means of prevention in all pestilential diseases.

EXCESSIVE GRIEF

Is well known often to have a powerful effect in causing disease. Every one who has lost a wife, a husband, parent, child, or bosom friend, well knows the depressing effect which grief has had upon them at the time. Especially when the disease is of a sudden, dangerous, and terrific character, grief is found to do its most fearful work. Let us imagine that a man goes to rest at

* London Morning Chronicle.

night with his family, all in apparent good health, and long before the sun shines out upon him in the morning, his wife, with all the agonies of cholera, becomes a corpse in his arms, and in a few hours more his only child; is it any wonder that, under such circumstances, he, too, should be struck down with the same disease? From all the facts that can be gathered on the subject, it is evident that grief has a very powerful influence as a proximate cause of the cholera.

MENTAL DISTRESS FROM WANT.

Mental distress, arising from destitution and want, may act as a powerful cause of epidemic disease. A husband and father, poor in this world's riches, has buried the mother of his children, the companion of his best and happiest days. A widow, with her children about her, toiling with anxious solicitude by day and by night, that she may keep them under her own paternal roof, rather than leave them to be provided for by the cold charities of the world; anxious, as by pawning her articles of dress, she pays her last cent for an exorbitant rent, being not able to imagine what merciful dispensation of providence can provide her for the next quarter day, or even with bread to eat. Such things, I need not repeat, occur every day, even in our American cities, where the people are the happiest and best provided for of any on the globe. Need it be said, that mental distress, arising from destitution and want, causing depression of spirits, anxiousness for the future, yes, for the bare bread one is to eat, will act, in many cases, as a cause of the cholera, should that dreaded pestilence again come among us?

SYMPATHY A CAUSE OF DISEASE.

What may be called sympathy in the human constitution, should throw light on the causes of cholera and other epidemic diseases. At the venerable old Cathedral of Notre Dame, in Paris, it was found necessary to allow no person to go upon its towers alone. Every one must have a companion, because it became generally understood that nervous people were very apt to throw themselves off. So, too, over the top of the Fire Monument, in London, there was put an iron rack work, so that people could not precipitate themselves from that height. In some hospitals, hysteric fits have caused the same symptoms in others; indeed, we see this thing often exemplified. You have heard of the account of the poor-house for children, at Harlæm, in Holland, where a girl from some cause, fell into convulsions, or a kind of convulsive disease, and which, being witnessed by the other children, communicated itself to nearly all of them. And the learned Boerhaave could find no other mode of putting a stop to the disease, except by preparing red-hot irons in the presence of the patients, at the same time declaring most solemnly, that any one who should manifest the least symptom of the disease, should be forthwith burnt to the bone. Other nervous diseases, as the St. Vitus's dance, have been known to become epidemic by sympathy.

When the cholera raged before in Europe, it is said that the intrepid gayety of the French seemed at first to brave off the terrible disease. Amid the festivities of Mid-Lent, the streets and Boulevards were thronged as is usual on such occasions, and the people in great numbers amused themselves by looking at caricatures in the

shop windows, the subject of which was the cholera morbus—a strange subject, certainly, for caricature, and such as none but a Frenchman could have conceived of. Now, at this very time, the cholera broke out in Paris in such terribleness as has seldom if ever been equaled elsewhere. As ever, there were here various causes at work, but one among the rest, doubtless, was the effect of sympathy in looking at those strangest of all exhibitions, the caricatures of cholera morbus.

The religious epidemics, as they may be not inaptly termed, should be mentioned in this connection. In one part of the country, persons are struck down, as it were dead, by the inscrutable power of God, as is believed. Every one has seen these things among that worthy denomination, who do more to spread the gospel every where than any other, the Methodists. Among the colored people we see, under a state of excitement, the audiences often become affected with violent spasmodic motions of the head, limbs, and other parts of the body. Years ago, in the Southwestern states, there was a prevailing religious excitement in which the subjects were affected with what was denominated the "jerks." People would gather themselves together in large circles for prayer, when one after another would become affected, until all experienced those particular symptoms, which were regarded as the most positive and indubitable evidence of the operation of the Holy Spirit in the soul. Even wicked young men, scoffers of religion, who entered these circles in a spirit of derision, intending to practice a deception upon the religious, were astonished and confounded to find themselves affected in the same way. Such became often powerfully impress-

ed, and in many instances went away converted, as they believed. The eccentric Lorenzo Dow saw, in some of the Southern states, one of the Carolinas, I think, people become affected with what he called the "kicks." Where the meetings were held, saplings were cut off, breast high, for the people to hold upon when they were affected with the "kicks;" and their motions were so energetic, that the ground about these saplings looked as if horses had been there, stamping at flies. The really pious, he says, were not affected by the symptoms; it was the lazy, lukewarm professor, who was most subject; and those who wanted to get the "kicks" to philosophize upon, were not affected at all. How much the principle in question had to do in the causation of the Salem witchcraft, I will not assume to determine. I mention all these things in no spirit of irreverence, but merely because they are calculated to throw light upon the subject of the causes of epidemic disease.

DRUNKENNESS AND INTEMPERANCE.

The temperance reformation, although coming far short of what it should accomplish, has yet done a vast amount of good; and this good is not confined merely to matters of a moral kind. It is a fact worthy of observation, that in 1832 the profession generally recommended a generous diet, including also the "moderate" use of wine, brandy, and the like. There were then those who objected to fermented drinks, but yet recommended wine instead; and through this, great quantities of vile mixtures of whiskey, logwood, etc., etc., were palmed off upon the people for wine. Such will doubtless again be the case, in those parts of our country

where people are not sufficiently enlightened to be guarded on the subject.

At this moment, Dec. 28th, 1848, there came news to us that the cholera is raging in New Orleans. A writer in a New York paper tells us, that "the bar-rooms have been filled for the past two days, and inordinate quantities of brandy, which is said to be a preventive, are consumed," and that great numbers become intoxicated. Why did not the cholera rage in New York, when it appeared a few weeks since here, as it did in 1832? Is it said, because the season was unfavorable? I answer, the extreme warmth and closeness, so to say, of the atmosphere, was remarkably favorable for the spread of the disease. Such exceedingly warm weather was never known in the month of December, as this year. But the cholera has had now, as it hereafter must have, hard work to get much hold of New Yorkers; the temperance reformation has done too much. The Southern cities will suffer most, and in great part because the people are far more intemperate than in the North.

I have not time here to enter into an explanation of the philosophy of the action of alcohol on the human frame, but will merely remark, that alcoholic drinks, of whatever name or kind, always necessarily irritate the entire track of the mucous membrane of the stomach and alimentary canal, more than two thousand square inches in extent, and therefore predispose the system to this fearful disease.

In Great Britain, the temperance reformation has gone mostly among the poor. When Father Matthew first went to London, there was but one clergyman in the whole city to stand by him in his benevolent work. He could gain influence only with the poor. He did not obtain

pledges of the rich, for he could not, if he had tried—only among the poor, such as the Five-Points people of this city. The cholera does not rage in Great Britain now as it did before, nor any thing like. This, we have every reason to believe, is caused in part by what the temperance reformation has already accomplished there.

It is plain, from all authority, that this disease manifests a decided preference for the intemperate every where. Often it has passed harmless over a wide population of temperate country people, to commit its most terrible ravages upon the drunkards of another locality.

I will now cite some facts on the subject of temperance, as bearing on cholera.

Dr. Sewall, of Washington, while on a visit to the cholera hospitals of New York in 1832, wrote, that of two hundred and four cases of cholera in the Park Hospital, there were only six temperate persons, and these had recovered; and when he wrote, one hundred and twenty-two of the others had died.

Dr. Mussey stated, in reference to the prevalence of the disease in the city of Albany: "Cholera prevailed for several weeks, attended with a severe mortality; and it is a remarkable fact, that during its whole period, it is not known that more than two individuals out of the five thousand members of the Temperance Societies n that city, became its victims."

The French Academy said, in 1832, "it is especially necessary to avoid spirituous liquors." And again: "The abuse of wine, brandy, and spirituous liquors, almost inevitably causes the cholera: we cannot repeat this too often to those who sometimes indulge in these excesses." The cholera raged principally among the

poor in Paris, the subjects of which were almost al .n-temperate.

Dr. RHINELANDER, who, together with Dr. DeKay, was deputed from New York, to visit Canada, for the purpose of making investigations concerning the best modes of prevention and cure of cholera, wrote as follows: "We may ask who are its victims? I answer, the intemperate; it invariably cuts them off."

It is said that in Poland nine tenths of all who died of cholera, before it reached this country in 1832, were addicted to habits of strong drink.

Mr. GREENHOW, of England, says that "innumerable instances might be brought forward wherein the attack supervened either during the continuance of, or immediately subsequent to, excessive indulgence in ardent spirits. Such was the case in two of the earliest instances that occurred in Newcastle, those of Eddy and Mills; and others have come under my observation." And this author very properly remarks: "Nor will it admit of a question, that the habitual use of ardent spirits greatly diminishes the healthy tone of the stomach and bowels, and induces an irritable condition of the mucous lining." Such remarks by a man living in a country of such universal drinking as England, and at a time when the temperance question had been so little agitated, exhibits a correctness of physiological and pathological knowledge altogether in advance of the mass of the profession at the time.

Dr. SCOUTTETTEN, of Strasbourg, in speaking of the causes of cholera, mentions "the abuse of alcoholic liquors and of all too stimulant substances." At Warsaw, the individuals affected generally belonged to the lowest class. Their condition, say Messrs. Brière

and Legallois, is wretched; their wants are extreme, and their food is very coarse brown bread, potato whiskey, salted meat and herrings, cheese of the country, and a paste made of water, which is very difficult of digestion; their habitations are very dirty, and are poorly ventilated, or not at all; they are situated on the borders of the Vistula, and are in fact mere drains; hence it is in this part, and in the low and narrow streets, that sickness and death are the most frequent."

Dr. Condie, of Philadelphia, remarked that in many cases occurring in old drunkards, where complete reaction has been established (after the state of collapse), and the patient has been convalescent for two or three days, delirium tremens has come. In all these cases, save one, which he had seen, the patient died.

Ordinarily, before an attack of cholera, there is with the patient more or less of indigestion; but Broussais observed that men who were in good health, having been intoxicated, have been seized the day following with cholera, though they had experienced no previous indigestion. Such are the pernicious and health-destroying effects of alcoholic stimulants on the human system, even in health. No wonder, then, that cholera comes hard upon old topers and habitual dram-drinkers.

There happened on Long Island, at a small village with which I am well acquainted, some cases of cholera, which, on a small scale, strikingly exemplify the pernicious effects of spirit-drinking. At this village—Oyster Bay, situated about thirty miles from the city of New York, on the north side of Long Island—there lived, in 1832, about fifty colored persons of various ages. Some clothes of a colored woman who had died in the city, were taken to the place. These were thought to

generate the cholera at this place. The colored inhabitants were all, or nearly all of them, very intemperate. In about one month's time, thirty-one or thirty-two of the fifty had been attacked, and of these twenty-one died. Only one white person, who also was a dram-drinker, was attacked with the disease. He had been laboring with a colored man, who was taken down with cholera, and took it from him, as would seem. These colored people were so degraded in their feelings and habits, that they could be induced to bury the dead only by being offered a gallon of rum as a reward. The authorities gave this, for no white persons could be found who would undertake the revolting task. All believed the disease contagious; but yet the negroes would do any thing for the sake of the rum. One old man lost his wife very suddenly; fought over her grave as she was being buried, himself nearly falling into it, and it was necessary to separate him and his antagonist by main force, as if they were fighting brutes. The same night the miserable old man, who was a fiddler, went and fiddled all night at a ball. These facts were given me by Dr. Lucius Kellogg, a very worthy citizen and physician of the place, and who lived there at the time alluded to, and himself attended personally many of the cases.

These facts of Oyster Bay prove what intemperance, in connection with other bad habits, may do in causing cholera. Some regard pure water and fine air quite sufficient to keep off an attack. But in no known place are the water and air better than at this most beautiful locality. I do not believe that a healthier place can be found in the whole United States, and yet we see how sad was the result of cholera among the intemperate.

PROSTITUTION.

Intemperance and prostitution go hand in hand. All of that unfortunate and much-neglected class of persons who follow a life of infamy, are habitually intemperate. They of all others are most subject to the dread epidemic of which we are speaking. In a single street of Paris, where resided thirteen hundred of this class of persons, we are told, on good authority, that in a very short period TWELVE HUNDRED PERISHED WITH CHOLERA! and that in another, containing sixty persons, EVERY ONE DIED! When cholera rages in a great city, and comes upon persons of this class, it is sad to think how soon often the husky, hollow, unearthly voice of the prostitute becomes stilled in death! Could the most abandoned, God-forsaken mother on earth know upon her death-bed that her daughter should come to such an end, how would it add to the death-agonies even of a harlot!

There is a very unpleasant subject, akin to this, of which it is my duty to speak. With persons of licentious habits, these terrible evils do not come upon one sex alone. The great Broussais, of Paris, tells us that one of his colleagues, a professor in the military hospital of Val-de-Grace, informed him of numerous examples of students who were seized with the cholera, after having visited a house of ill-fame; and that all those physicians who had studied the disease at Warsaw, in Russia, and other places, have observed similar facts. With no class of persons than the licentious, is the saying more true, "THE WAY OF THE TRANSGRESSOR IS HARD."

DOSING AND DRUGGING.

The interminate, never-satisfied, and never-ending dosings, with the ten thousand "cure alls" which the American people, above all other nations, are fond of, will prove a most prolific source of any and every raging disease. Suppose we are to follow the advice of a New England divine, "Fear God and keep the bowels open;" it does not follow, necessarily, that we must keep dosing, dosing, continually therefor. Dosing is perilous in the cholera. Dr. Mackintosh, of Edinburgh, who had much opportunity for observation in this disease, said he had seen several people sink rapidly into a fatal collapse, during the cholera epidemic, under the operation of aperient medicine; persons who had no previous bowel complaint, but felt only slight oppression, which they imagined would be relieved by an action of the bowels. Persons, in their ignorance and disregard of hygienic rules, are ever ready to go on gorging their stomachs with food, crude and indigestible, and such as would give a hyena a "fit of dyspepsia," and then expect that, by dosing their bowels right earnestly, their physical sins will thus be atoned for. Think of a person eating sausages, smoked meat, and tripe, well charged with pepper, mustard, and the like, and then a good dose of pills withal, what suppose you would be the result in cholera times?

It is easy for us to see that, if the cholera should again prevail among us, there would be great numbers of specifics advertised for the disease, and not only advertised, but actually bought and swallowed. I need not cite you that even now, in ordinary times, our papers are well filled with the thousand-and-one infallible specifics to

cure all manner of maladies, from the pimple on the face to the most inveterate consumption. Witness how ignorant pretenders, and villainous quacks, every day grow rich in their vile traffickings in this free country of ours, and you have the evidence of a degree of superstition, ignorance, and credulity, that has never been exceeded in any age.

Already in our city, there is a medicine for cholera advertised, with the plausible statement that people must send for a physician as soon as possible, when they are attacked, but that this medicine is the best possible, and perfectly safe to be taken, before the doctor can be got. How very considerate are these medicine venders of the public health!

DIETETIC IMPROPRIETIES.

In regard to dietetic habits, it should be remembered, that comparatively trifling excesses are, in certain states of the system, often sufficient to derange seriously the general health. Remember, too, that attacks of cholera are invariably preceded by more or less disturbance of the digestive organs. True, this is sometimes so slight that the individual may not notice it; but such, however, is the fact. Without previously disordered digestive organs, to a greater or less extent, no individual could ever experience an attack of this fearful disease.

Every one must have noticed how easily the system becomes deranged by dietetic improprieties, when the stomach and bowels were already in a disordered state Who does not know that a little too much, even of the best and most healthful forms of food, sets one at once

back into a troublesome diarrhea that had just been cured? And does not every sensible practitioner understand, that dietetic improprieties are by far the most frequent causes of those terrible relapses in acute diseases of the stomach and bowels; relapses which always cost the practitioner so much anxiety, and the patient so much suffering, and not unfrequently his life? As you value life, be careful, in cholera time, of diet, whenever there is in your system the least disorder of the digestive ogans.

There are facts in abundance that prove, beyond all doubt, the ill effects of "riotous living," in causing the outbreaks of disease. Thus the great Dr. Benjamin Rush was in the habit of telling his students in his lectures, that he had for many years observed a very great increase in the number of cases of acute disease on the fifth and sixth days of July; and this, he said, was undoubtedly caused by the excesses of the fourth. And Dr. Greenhow, of Newcastle-on-the-Tyne, England, tells us that the extraordinary irruption of the disease at Gateshead, in the midst of the Christmas feastings, offers a remarkable example of the dietetic and drinking excesses. The French Academy said, "that all excesses in eating, even a slight indigestion, during the reign of the cholera, is almost certain to produce the disease." In New York there was found to be a disproportionate increase of new cases of cholera, immediately after the celebration of the fourth of July, in precise accordance with the facts noticed by Dr. Rush in other acute diseases. After there was a decline of the disease at Riga, the occurrence of the Whitsun holidays was immediately followed by an augmentation of fresh cases of cholera. As cholera began to rage in Paris, many thought to ward

off the disease by hilarity and excess. The theatres were crowded in the evening, and there were young men, who, in the extravagance of their foolhardiness, plunged into unusual excesses. Since we are to die to-morrow, they said, let us exhaust all the joys of life to-day. Most of these rash youths, we are told, "passed from the masked ball to the Hotel Dieu, and died before sunset the next day."

FILTHINESS AND DEGRADATION.

CHOLERA, as is true of all pestilential diseases, comes first among the low, miserable, and filthy of the cities. There should be in New York, and every American city, FREE BATHS AND WASH-HOUSES for promoting cleanliness among the poor. I saw last winter, in London one of these establishments used also for lodging poor persons, in Rosemary Lane. This is not far from Spitalfields, the great "Five Points" of London—a district covering the space of a square mile—St. Giles the former "Five Points," having been renovated by the authorities, its streets widened, and the poor scattered about. It would be difficult for an American to conceive of the utter squalidness and misery of the people of some parts of London, without visiting them; and yet there is a much better state of things now than there was before the temperance reformation began. The Health-of-Towns Associations are also doing much to better the condition of the poor. In the bathing establishment above mentioned, a large number of poor people congregated every night. Four hundred and fifty could be accommodated at a time, and great numbers had to go away beside. There were people of the

very lowest class, beggars, thieves, the lowest prostitutes, and such as had no home but the streets. The name and age of every one were registered in a large book, together with other particulars, as to where they were from, their occupation, where they had lodged the night before, etc. Those only who declared that they had no money were received. Every one was required at first to perform a thorough ablution with soap and tepid water, so that for once they might have a clean skin, for it was in many instances doubtless the first time in their life. Then, after the bath, a half-pound of the very best London bread was given to each person; and the bread in London *is* BREAD, and not such stuff as the people require our bakers to get up in New York. England, with all her misery, has science, and she applies it to every thing—even to that small matter, as people regard it, making bread. But there was one great mistake in this matter; the bread was superfine, which is always bad—bad, because it is so rich that neither man nor animal can long subsist upon it; whereas the bread from unbolted flour, containing in itself a proper portion of innutritious with the nutritious matter will sustain life any desirable time. I said to the Superintendent, "Why do you not give these people BROWN bread, which would be so much better for them?" He said he knew it was so, but they would not eat it; many would curse them for it, and cast it into the street. After this bread-and-water repast, these people were lodged—not exactly upon a bed, but in rows on the soft side of a hard floor. Each one had a little box by himself, and the whole floor was covered with these divisions, with the exception of the narrowest aisles to walk among them. There was a little angular elevation of

plank for the head to rest upon—and even that served as a pillow for which many a poor man was thankful enough. One skin coverlet served as a covering for each. The rooms were large and airy, warmed and well ventilated, and each sex had its own apartment. Men, women, boys, and girls were not here huddled together half-naked, as in multitudes of penny and two-penny lodging houses in certain parts of London, or as in the steerages of our world-renowned American ships. In these bath and washing establishments—and there are a number of them in London—religious meetings are held on the Sabbath; a clergyman comes and preaches, and they are able to have singing, as people elsewhere. Such, at least, was the case in the one I visited. The meeting is held in the largest lodging room, but there are no seats except those little divisions spoken of, five or six inches high, the edge of the board forming a seat. On Sundays the people have half a pound of bread at noon, as well as night and morning, and an ounce or two of cheese extra.

The Ragged Schools in Great Britain, are doing much toward bettering the condition of the poor.

The Philadelphia Board of Health gave lately the following excellent advice concerning the means of preventing cholera: "Early and constant inspection of the yards and cellars of houses, with a removal of the rubbish and filth that may be found therein; to be followed by thorough whitewashing and purification; a most frequent cleansing of the streets and gutters, and attention to paving and grading the same, so as to avoid accumulations of water or garbage any where; an especial attention to the cleansing of private courts and alleys common to several dwellings the suppression of pig-

sties and piggeries, cleaning foul privies with the use of deodorizing agents; filling or draining of pools or ponds of stagnant water, and personal cleanliness by bathing; in short, to keep the physical and moral man CLEAN."

FRUITS AND VEGETABLES.

There is a prevailing opinion that vegetables and fruits should be discarded in cholera time. But this is a wrong notion, and not one founded on fact. Professor Dunglison, of Philadelphia, remarks, that "ripe fruits and the succulent vegetables were generally proscribed; the facts are, that in eleemosynary institutions where no such articles were permitted, cholera was most fatal; that the disease prevailed at Moscow and St. Petersburgh, and elsewhere, at seasons when ripe fruits and vegetables could not be procured; that when ripe fruits were freely allowed, as in London, at a later period of the epidemic, no inconvenience was found to result from them."

The plain truth in this matter is, that the kinds of food which are in all respects best adapted to man's nature under ordinary circumstances, are also best during the prevalence of epidemic disease.

THE ATMOSPHERE AND ELECTRICITY.

Some believe that atmospheric changes, or a peculiar condition of air, is the principal cause of cholera. Some also believe that we are to look to electrical changes as the great cause. I would speak in all deference to the opinions of others in these matters, but it appears to me that very little or nothing is known about these agencies. Bad air we know is always bad; but as to wheth-

er any particular electrical state can be identified as a cause of cholera, I think does not appear.

I will close this lecture by citing some most important and instructive facts, not only touching diet, but the general hygienic regimen of the individual. I first mention

HOWARD, THE PHILANTHROPIST.

Howard, the philanthropist, was exposed to the influence of pestilence and disease in its most malignant forms, probably more than any other human being who has ever lived. "This man," says one biographer, "visited all Europe, not to survey the sumptuousness of palaces, or the stateliness of temples; not to make accurate measurements of the remains of ancient grandeur, nor to form a scale of the curiosities of modern art; not to collect medals, or to collate manuscripts; but to dive into the depths of dungeons; to plunge into the infection of hospitals; to survey the mansions of sorrow and of pain; to take the gauge and dimensions of misery, depression, and contempt; to remember the forgotten; to attend to the neglected; to visit the forsaken; and to compare and collate the distresses of all men in all countries." "He traveled," says another, "between fifty and sixty thousand miles, for the sole purpose of relieving the distresses of the most wretched of the human race. The fatigue, the dangers, the privations he underwent or encountered for the good of others, were such as no one else was ever exposed to in such a cause, and such as few could have endured. He often traveled several days and nights in succession, without stopping,—over roads

almost impassable, in weather the most inclement, and with accommodations the meanest and most wretched. Summer and winter, heat and cold, rain and snow, in all their extremes, failed alike to stay him for a moment in his course; while plague, and pestilence, and famine, instead of being evils that he shunned, were those with which he was most familiar, and to many of whose horrors he voluntarily exposed himself, visiting the foulest dungeons, filled with malignant infection,—spending forty days in a filthy and infected lazaretto,—plunging into military encampments where the plague was committing its most frightful ravages,—and visiting wnere none of his conductors dared to accompany him."

Under such circumstances, the habits of Howard were very simple, rigid, and abstemious in the extreme. In all seasons he made it a point of the utmost importance to practice daily bathing. "Water," says Dr. Aiken, "was one of his principal necessaries, for he was a very Mussulman in his ablutions; and if nicety had place with him in any respect, it was in the perfect cleanliness of his whole person." "These ablutions," says another, (Dr. Brown), "he regularly performed in the depth of winter, by plunging into a bath whenever he had the opportunity of doing so,—and when he had not, he would frequently lay himself down for some considerable time between two sheets, wet for the express purpose of communicating to his body the desirable degree of cold." According to another author, "both on rising and going to bed, he often swathed himself in coarse towels, wet with the coldest water; in that state he remained half an hour, or more, and then threw them off, freshened and invigorated, as he said, beyond measure." He never used a great-coat, we are told even when in

the coldest countries. For many of the last years of his existence, he tasted neither flesh, fish, or fowl; and near he close of his life, he wrote in his diary, "I am firmly persuaded, as to the health of our bodies, that herbs and fruits will sustain nature, in every respect, far beyond the best flesh!" So prudent was he of time, that he strenuously avoided dining parties, nor would he sit when taking his simple meal of tea, milk, and rusks.

On becoming acquainted with these singular habits of Howard, one would naturally be led to suppose that his constitution must, from the first, have been a strong one, capable of enduring great exposures and fatigue. Such, however, is not the fact. He was, when young, as he himself tells us, of very feeble health.*

But notwithstanding all Howard's good habits, he no doubt injured himself materially by the use of tea, of which he was said to be very fond.

* "A more puny youngster than myself," says Howard, "was never seen. If I wet my feet I was sure to take cold. I could not put on my shirt without its being aired. To be serious, I am convinced *that what emasculates the body debilitates the mind*, and renders both unfit for those exertions which are of such use to us as social beings. I therefore entered upon a reform of my constitution, and have succeeded in such a degree, that I have neither had a cough, cold, the vapors, nor any more alarming disorder, since I surmounted the seasoning. Formerly, mulled wines, and spirits, and great fires, were to comfort me, and to keep out the cold, as it is called; the perils of the day were to be baffled by something taken hot on going to bed; and before I pursued my journey the next morning, *a dram* was to be swallowed to fortify the stomach! Believe me," said Mr. Howard, "we are too apt to *invert the remedies which we ought to prescribe for ourselves*. Thus we are forever giving *hot* things when we should administer *cold*. We bathe in hot instead of cold water, we use a dry bandage when we should use a wet one, and we increase our food and clothing when we should, by degrees, diminish both.

"If we should trust more to Nature, and suffer her to apply her own remedies to cure her own diseases, the formidable catalogue of maladies would be reduced to one half, at least, of their present number."—*Pratt's Gleanings*, 1796.

BIBLE CHRISTIANS OF PHILADELPHIA.

There is, in the city of Philadelphia, a people little known—the Bible Christians. The members of this sect abstain religiously from all intoxicating substances, and from flesh. They aim to live temperately and soberly in all things. The Rev. Mr. Metcalf, of this sect in Philadelphia, furnished Mr. O. S. Fowler and myself, at our request, the following account of their experience during those fearful epidemics, the yellow fever and the cholera:

"When the yellow fever broke out at the foot of Market street, in the autumn of 1818, my residence was in the immediate vicinity of the infected district, namely, in Front near Market street. There I continued with my family, while most of our neighbors fled from the site, for fear of being affected with that dreaded malady; yet we all continued to enjoy excellent health. The following year our experience was similar. During the period of the cholera, I am not aware that any of our members were in the least affected by that disorder. My duty as a minister frequently led me to the bedside of the sick and dying poor, and often to perform the last obsequies over the dead; yet, amidst all these painful duties, the same kind and merciful Providence which 'tempers the wind to the shorn lamb,' protected and preserved me in the enjoyment of uninterrupted health. You doubtless remember there were many conflicting rumors of opinions among eminent physicians and others, about the propriety of avoiding vegetables and fruits during the continuance of the epidemic. I have no knowledge that any of our members made the least alteration in their accustomed mode

of diet during that time, and yet they all escaped suffering from that fatal contagion. In my own family, vegetables and fruits were as freely used as in former seasons, without suffering any inconvenience."

VEGETABLE DIET IN NEW YORK.

The experience of those in this city who adopted a course similar to these Christians, was not less striking. It will be recollected, that Mr. Sylvester Graham was the means of inducing a considerable number to follow his peculiar modes. Mr. Graham says, in his work on the Science of Human Life: "The opinion had been imported from Europe, and generally received in our country, that a generous diet, embracing a large proportion of flesh meat, flesh soups, etc., with a little good wine, and a strict abstinence from most fruits and vegetables, were the very best means to escape an attack of that terrible disease. Nearly four months before the cholera appeared in New York, I gave a public lecture on the subject in that city, in which I contended that an entire abstinence from flesh meat and flesh soups, and alcoholic and narcotic liquors and substances, and from every kind of purely stimulating substances; and the observance of a correct general regimen in regard to sleeping, bathing, clothing, exercise, the indulgence of the natural passions, appetites, etc., etc., would constitute the surest means by which any one could rationally hope to be preserved from an attack of that disease. I repeated this lecture after the cholera had commenced its ravages in the city, and, notwithstanding the powerful opposition to the opinions which I advanced, a very considerable number of citizens strictly adhered to my ad-

vice. And it is an important fact, that of all who followed my prescribed regimen uniformly and consistently, not one fell a victim to that fearful disease, and very few had the slightest symptoms of an attack."

In conclusion, it is too much for people to believe that mankind can have any considerable control over health. Disease is not regarded as being subject to laws. The world has long been taught that the most deadly diseases may come at any time upon the most healthy. But such a thing cannot be. Facts every where prove the contrary. When the cholera rages among us, as it doubtless will, in a greater or less degree, the coming summer, then let it be seen who are the most subject to the disease—with whom it is the most fatal. The cleanly, temperate, honest, industrious persons—these are the ones who, of all others, are most certain of remaining free from an attack. As you value life, health, and happiness, avoid, in times of cholera, fear, panic, anger, immoderate grief, and all undue excitements of the mind. I cannot too strongly recommend you to maintain an equable serenity and cheerfulness of temper and feelings. Be industrious, and habitually regular and temperate in all your habits and actions. As one of the most powerful auxiliaries in governing and regulating the mental and moral manifestations, pay particular regard to your dietetic and other personal and physiological habits. Avoid spirits as poison, in every form. Tobacco, one of the vilest of things, is especially bad in causing indigestion, and thus predisposing the system to cholera. Tea and coffee, those articles so much in vogue in our favored country—every where used, even among the poorest of the poor—depress the vital ener

gies of the system by their stimulant and poisonous effects, thus rendering you more subject to fear, and more liable to prevailing diseases, of whatever kind. They make you dyspeptic, nervous, tremulous, irresolute, subject to sick headaches; as many may prove, if they will but drink pure, soft, cold water only, and that plentifully, for three months. The homœopathic theory very properly proscribes tea and coffee, because of their MEDICINAL effects, although in practice the theory is not carried out. It was well said, by an ancient poet "Water is the best thing;" and by another:

> "Nothing like simple element dilutes
> The food, or gives the chyle so soon to flow.'

And still another:

> "O, madness! to think use of strongest wines
> And strongest drink our chief support of health,
> When God with these forbidden, made choice to rear
> His mighty champion, strong above compare,
> Whose drink was only from the limpid brook."

So, too, Shakspeare:

> "Though I look old, yet I am strong and lusty,
> For in my youth I never did apply
> Hot and rebellious liquors in my blood;
> Nor did not with unbashful forehead woo
> The means of weakness and debility;
> Therefore my age is as a lusty winter,
> Frosty but kindly."

"The more simple life is supported," says Dr. Paris, "the better, and he is happy who considers water the best drink." And Dr. F. Hoffman long ago said: "Pure water is the best drink for persons of all temperaments; it promotes a free and equable circulation of the blood, on which the due performance of every

function depends. Water-drinkers are not only the most active and vigorous, but the most healthy and cheerful."

Make no great and sudden changes in diet, but as soon as may be, get upon the brown bread and cold water plan. Superfine bread, if eaten continuously, without any counteracting substance, would destroy life, because of its too great richness. Good brown bread, as of wheat, Indian, or rye, or even potatoes alone and without salt; any of these, with pure soft water to drink, is amply sufficient to sustain you in the firmest health. A very moderate use of milk may be indulged in, but flesh meat is better omitted wholly. And of bathing—daily cleansing the whole body with water, tepid, cool, or cold, according to the strength—too much cannot be said. A story relates: A French doctor went to Damascus to seek his fortune. When he saw the luxurious vegetation, he said, "This is the place for me, plenty of fever." And then on seeing the abundance of water, he said, "More fever; no place like Damascus!" When he entered the town, he asked the people, "What is this building?" "A bath!" "And what is that building?" "A bath!" "And that other building?" "A bath!" "Curse on the baths! they take the bread out of my mouth," said the doctor; "I must seek fever practice elsewhere." So he turned his back, went out of the gate again, and hied himself elsewhere. It would be well if every city were, in respect to baths, like Damascus, and all the people bathers. There will be no cholera practice to be had among the temperate and the clean.

Finally, I recommend to you the earnest study of all the laws of health. This is a great study; one that requires much time and hard thought; and once you un-

derstand these laws, you have yet much to do in resisting temptations, and will be very apt often to come short of the true mark. Both as a means of prevention and cure in cholera, I cannot too strongly recommend to you "TEMPERANCE IN ALL THINGS." Study it; practice it; so that with God's blessing, you may live on to a ripe old age, without suffering, without pain, and your life cease in natural death, when,

> "Like a clock, worn out with eating time,
> The wheels of weary life at last stand still!"

The cholera is a most fearful epidemic. In the buoyancy and gladsomeness of health, we are not apt to think of disease. It is a serious thing to be attacked by a malady that destroys its victim, as it were, in a single hour. "Take heed to yourselves, lest you be overcharged with surfeiting, and drunkenness, and the cares of life, and that day come upon you unawares."

LECTURE II.

Recapitulation.—Manner of an attack of Cholera.—Symptoms of Cholera.—First stage.—Second stage.—Stage of Collapse.—Length of time Cholera patients live.—Nature of Cholera—Medical Authority on the Treatment of Cholera.—Dr. Elliotson.—Dr. Watson.—Dr. Marshall Hall.—Dr. Billing.—Dr. Scouttetten.—Dr. J. V. C. Smith.—Dr. Wood.—Dr. Dunglinson.—Dr. Mackintosh.—Dr. Condie.—Dr. P. C. Tappen.—Philadelphia Board of Health.—Dr. Parkes.—Dr. Broussais.—London Morning Chronicle.—Drs. Bell and Condie on Saline Injection into the Veins and Arteriotomy.—Blood-letting.—Dr. Tappen's Remarks thereon.—Homeopathic Treatment.—Closing Remarks.

In the preceding lecture I spoke chiefly of the CAUSES and PREVENTION of cholera. In the present I propose to describe the disease more fully, and to speak of the various modes that have been adopted by the so-called orthodox school of medicine in the treatment of this most formidable of all modern epidemics.

I remarked that the NAME of cholera is incorrect, inasmuch as it signifies a discharging of bile. It is characteristic of the disease, when fully developed, that there is no discharge of bile whatever. This is one of the most peculiar features of the disease.

I laid down as an axiom, *that every thing which tends in any way to depress the general health, predisposes the system to an attack.* Dr. Elliotson, of London, very properly remarks: "The disease has great difficulty in attacking those who are in good health, and well off." I remarked, also, that it is the filthy, miserable people, and above all, the intemperate, and those that lead a life of prostitution, who are of all persons most subject to the disease, and the most certain of being cut off.

Whether cholera be a contagious disease or not, we know it visits large cities principally; that it often

passes directly, at a single stride, from one large city to another, as from London to Paris, leaving all intermediate places untouched. But this is not always the case; it sometimes comes upon small country places, where the condition and habits of the people are bad.

I remarked also, that one thing should be particularly remembered in reference to the coming on of cholera. There will be a great variety of specifics put forth as sure preventives and cures; and such things will be heralded forth, in the way of advertising, in many of our papers; and these will be bought and used by many, else they would not be thus advertised. Now all such articles, if they have any potency in them, will always be more or less injurious, in proportion to their character, and to the individual's health. The strictest abstinence from all medicinal substances, spirits, tea, coffee and spices, tobacco—in short, from all stimulants in cholera, is the only safe rule. "Avoid physic and physicians if you value health," was never more applicable than here.

MANNER OF AN ATTACK OF CHOLERA.

If it is impossible to arrive at the true nature of cholera, we may know and treat it by its effects. Mark well one thing: in its beginning it is in general a MILD disease. People are not struck down all of a sudden, as we have been often told, and without any premonitions of an attack.* There must be pre-existing disease. If a

* The Rev. H. G. O. Dwight, a missionary of the American Board, writing to the New York Observer, Aug. 27, 1848, says: "The Asiatic cholera, which, when fairly seated, is one of the most unmanageable of all diseases—despising all human art and skill, and mocking all the assiduities of friendship—in almost all cases, begins with a MILD DIARRHEA

person is in all respects well, and practices uniformly good and regular habits, no attack of cholera can come upon him. There are people, however, who are thought by themselves and the many to be perfectly well, who are yet among the subjects most liable to cholera. Corpulent men, with red faces, high livers, the very personification of health, as people say, are very liable to diseases of the bowels, and consequently to cholera. The truth is, such persons are never well, and carry constantly within them the seeds of disease. Facts abundantly prove that no really healthy person can be attacked with cholera.

There is, then, preceding the real attack of cholera, a diseased condition of the stomach and bowels—a state of things which it is possible, in almost every conceivable case, to manage safely, and thus prevent the final invasion of the terrific disease.

SYMPTOMS OF CHOLERA—FIRST STAGE.

The symptoms of cholera, as authors give them, are many and various. As in all other severe diseases,

which in that stage is most readily cured. True, where the cholera is raging, we are continually hearing of persons who arose well in the morning, and are in their graves before night; and it is not to be doubted, that there are some cases in which the very first attack of the disease is THE COLLAPSE, from which recovery is rare. But I can say with truth that in EVERY INSTANCE of these sudden deaths of cholera, in which I have been able to investigate the circumstances, I have found that the individual HAD BEEN LABORING UNDER DIARRHEA FOR SOME DAYS PREVIOUS. Generally, it is so slight as not to be much noticed; it is attended with no pains, and no sickness of stomach, perhaps, and gives the person no particular inconvenience. But it is this very diarrhea which is insidiously preparing the system for the most dreadful onset of the disease." These remarks are very judicious, although not made by a medical man.

there will be much variation in the manner of the attack. The disease has been by some divided into three stages. After the mild diarrhea, which has been generally for some days present, there occur griping pains in the stomach and bowels, nausea, tenesmus (or a bearing down and desire to evacuate the bowels, and without any effect); at other times there are watery discharges from the bowels; sometimes there is a thin, slimy discharge, streaked with blood. But generally the discharges are not attended with pain, as in dysentery, but take place with ease, almost without the consciousness of the patient. It is said that "in the debilitated, and especially in the intemperate, the evacuations from the bowels are, from the first, often extremely copious, whey-like, and produce a sense of extreme exhaustion, a faintness, or even fainting; and that in such cases, in a very few hours, the most terrible cramps, vomiting, and collapse come on." Any improper exposure, and especially any imprudence in eating, drinking, or the taking of medicine, will in such cases accelerate the coming on of the second and third stages. In the first stage the appetite is diminished or entirely gone, and the desire for cold water is proportionably increased. There are also shooting pains in the extremities, particularly the calves of the legs. Patients describe their symptoms as of all the blood rushing to the interior of the abdomen; sometimes feeling as if electric shocks were passing through the bowels, accompanied with very great and unendurable heat.

SECOND STAGE.

In what may be termed the SECOND STAGE, there is almost constant vomiting and purging of what has been

denominated "rice-water fluid." This turbid, whitish liquid, "pours again and again from the bowels in streams and is spouted from the mouth as if from a pump." The vomiting itself is generally easy, and comparatively without effort, and appearing to give momentary relief. Again, there are violent pains of the stomach and bowels, and of the head and back, with violent spasms of the muscles, and more especially of the extremities.

The pain, we are told by those who have seen much of the disease, often causes the most courageous to make noisy outcries, and to roll themselves about as if frantic. The agony about the heart often experienced in cholera, is believed to be as great as that of any which mankind are ever brought to endure. In consequence of this agony, there comes on necessarily such extreme weakness, that the patient cannot move; the trunk of the body in particular becomes powerless.

The pulse may be full, or small and contracted. The skin is bathed in a clammy perspiration, and has a peculiar FEEL, like dough. Some have compared the skin in this state to a wet hide. The countenance is expressive of great anxiety and distress, although the mental faculties remain unimpaired. Already in this stage the secretion of the kidneys often entirely ceases; the thirst is inordinate—so great, in some instances, that the patient gets out of bed, goes to the pump, or wherever he may obtain water, and sometimes even drinks the fluid which he has before vomited. In no disease is the thirst so great as in cholera.

STAGE OF COLLAPSE.

Next comes the stage of COLLAPSE, as it is called. A remarkable change takes place in the appearance of the

patient. The surface becomes cold, and in many instances blue; the lips are purple, the tongue cold, and of the color of lead. The wrist becomes pulseless. The breath is also cold; the eyes are sunk deep in their sockets, and the whole appearance has changed and become ghastly as that of a corpse. In many instances so great a change takes place in a few hours, that near friends cannot recognize the sufferer. The peculiar appearance of the physiognomy in confirmed cholera, is so expressive of extreme anguish, that the name "triangular face" has been used to designate it. "It bears a striking resemblance to the appearance of AGE; and seems to arise from the paleness, wasting, and shrinking of the features, and the depressed and disturbed state of the mind, conveying into the countenance a strong expression of care, anxiety, and alarm."—*Orton, as quoted by Dr. Jas. Johnson.*

There is cold, profuse perspiration, which seems to exude in large drops from every pore; and, notwithstanding this coldness, the patient complains of the burning heat at the stomach, and craves more than ever cold water, and the cool fresh air. The watery discharges from the bowels continue; "the hands and fingers are shriveled, white, corrugated, and sodden, like those of a washerwoman after a long day's work. The voice is very peculiar, husky, and faint. At last the patient is free from pain and vomiting, and remains apparently tranquil; not willing to make the least exertion, and as if quietly awaiting the approach of death." Such are the symptoms constituting what is termed a state of collapse. The symptoms will, of course, vary greatly in different cases; sometimes coming on very suddenly, almost without any warning; at other times lingering for days.

If reaction or return of warmth and circulation appear in collapse, there is more hope for the patient; and yet there is danger from consecutive fever and kindred local affections; especially where inordinate dosing has been practiced, this holds true. It has been remarked that when inebriates passed into a state of reaction following collapse, they were very apt to be attacked by *delirium tremens*, and were almost certain to die. I believe that about one half of all cholera patients in regular practice have perished with the disease.*

* Broussais thus describes the "exterior" symptoms of cholera:

"The muscles are strongly marked under the skin; the eyes are hollow, dry, and sunken; after some hours, the consistence of the eyeball seems to be dissolved; and one would say the eyes were turned inward by means of a thread. The aspect of the patient is hideous; the face very soon loses its fullness, and is contracted in a manner peculiar to these affections: but what causes the greatest astonishment, is the livid hue which spreads itself over the countenance as the disease advances. The extremities are cold; the tongue is usually pale, chill, broad, and flat; the breath cold, and the pulse feeble; the words are rather breathed than pronounced. The patient remains motionless, on the back; if you force them to lay upon the side, they cannot continue so long, but beg to be laid on their back, so that the breast may be raised. While the body thus remains still, they move the feet and hands, uncover the breast, complain of a fire within, and tear off the poultices and other warm applications placed on the stomach; they turn from one side to the other, but are not able to rise up. The color becomes darker and darker, and is soon livid. It varies, however, according to the natural complexion of the patient. Dark complexions become black or bluish; but those which are more transparent turn yellow, taking the color of bad gilding. This is followed by cessation of the pulse, which I shall call asphyxy. The pulse grows weak rapidly, and sometimes disappears in three hours, or even less. As soon as the pulse begins to grow feeble, the patient falls into the heaviness I have referred to: there are cases, however, in which he still preserves his strength when the pulse is extinct, and is even able to raise himself up, and go from one place to another; but this strength is soon lost, and the unhappy person falls powerless. After the cessation of the pulse, the black hue manifests itself with various rapidity, sometimes at the end of two or three hours, sometimes even in less; this depends upon the promptitude with which circulation ceases."

LENGTH OF TIME CHOLERA PATIENTS LIVE.

The length of time cholera patients survive must of course vary very much; some die in an hour or two others linger for days. I was informed at Quarantine, Staten Island, by the very gentlemanly assistant physicians of Dr. Whiting, Health Officer of the city of New York, that the average time of the cases there for about two weeks, had been ten hours; that some died within two hours, and that few lived to thirty-six hours.

NATURE OF CHOLERA.

The cholera is emphatically a disease of the mucous or lining membrane of the stomach and bowels. This internal *skin*, as it may be called, is much larger in extent than would at first be supposed. Beginning at the mouth and throat, descending, we have the œsophagus, stomach, duodenum or second stomach, the jejunum, ileum, the last three forming the small intestines; and the coecum, colon, and rectum, comprising the large intestine. This whole tract, upward of thirty feet in length, is lined with the mucous membrane, which is more than two thousand square inches, or about thirteen square feet in extent. It is upon and through this great surface that the food is formed into chyme, afterward chyle, which last passes into the circulation and becomes blood. Effete and worn-out matters of the system are also thrown off in large quantities through the lower part of this surface. This extensive membrane is also supplied in all its parts, with myriads of nervous filaments, and through the ganglionic nervous system is brought into a very intimate connection with every part

of the organism. Upon and through this membrane, the cholera manifests itself. There is congestion (stagnation of blood) in all of the abdominal organs, but if we are to regard the cholera a disease of any one particular part, it is the mucous membrane of the alimentary canal.

There are various theories among pathologists as to the true nature of cholera. Thus there is the nervous theory, so called—a theory implying that the nervous system, or the nervous fluid—of which so much is said and so little known—is wholly at fault. Another theory is that of congestion; and still another, that of acute inflammation. Whichever of these theories a practitioner may adopt, or whether he adopt no theory at all, he must treat the disease according to the SYMPTOMS as he finds them. All the most ingenious theorizing in the world will avail him nothing, when he comes to undertake the serious matter of treating the sick. I repeat, every judicious practitioner will treat cholera ACCORDING TO THE SYMPTOMS AS HE FINDS THEM AT THE TIME. Moreover, whether he be a theorizer or not, he must be, to a considerable extent, AN EXPERIMENTER, so difficult are many things in the medical art.

In another place, when I come to speak of the water-treatment, I will enter into a practical analysis of the symptoms of cholera.

I pass now to a consideration of the various modes of treatment that have been adopted by the orthodox school. In doing this, I will make copious extracts from the best authors, without bitterness or censoriousness, and with a sincere love of truth, and a desire to show forth things as they actually exist. I would have things appear only in their true light. I respect the honest

opinions of men who, were they attacked with cholera, would cause themselves to be treated in the same modes, terrible though they might be, by which they also treat others. I respect those men WHO DO AS THEY WOULD BE DONE BY in this matter; and such is true of a majority of that profession of men who, more than all others, are under the painful necessity of coming in contact with suffering, disease, and death.

MEDICAL AUTHORITIES ON THE TREATMENT OF CHOLERA.

Dr. ELLIOTSON, of London, in "Principles and Practice of Medicine," says: "We are not in the least more informed as to the proper reme ies, than we were when the first case of cholera occurred; we have not been instructed, in the least, by those who have had the disease to treat. Some say that they have cured the disease by bleeding; others by calomel; others by opium; and others, again, say that opium does harm. No doubt many poor creatures have died uncomfortably, who would have died tranquilly if nothing had been done to them. Some were placed in hot water, or in hot air, and had opium and calomel, and other stimulants; which, altogether, were more than their systems would bear, and more than would have been borne if they had been so treated even in perfect health." And again: "I am sorry to say that, of the cases I had to treat, the patients nearly all died. I tried two or three sorts of treatment. Some had opium and calomel, in large and full doses; but they died. Hot air was applied externally: and I got two to BREATHE hot air. I had a tube passed through boiling water, so that they might inhale hot air. It was found vain to attempt to warm people by hot air

applied EXTERNALLY. They were nearly as cold as before; we could not raise their temperature; and therefore I thought of making them breathe hot air; but both patients died about the period that death usually takes place. It was said that saline treatment was likely to be of use; and I accordingly tried it with some patients. At first I exhibited half a drachm of sesquicarbonate of soda, every hour; and thinking that might not be quite enough, I exhibited a drachm; in one patient, at St. Thomas's Hospital, I ordered an injection containing an ounce of the same remedy, but the greater part of it came away, and the patient died. Hot air was used in this case as well as the others."

Dr. WATSON, of London, in his lectures on the Principles and Practice of Physic, says: "Some patients (in cholera) after the vomiting, and purging, and cramps had departed, died comatose (in stupor); over-drugged sometimes, it is to be feared, by opium. The rude discipline to which they were subjected, might account for some of the cases of fever; and the process of artificially replenishing the veins was certainly attended with much danger. The injection of AIR with the water—inflammation of the vein from the violence done to it—an over-repletion and distension of the vessels by the liquid—MIGHT, any one of them, and sometimes, I suppose, DID, occasion the death of the patient. Never, certainly, was the artillery of medicine more vigorously plied—never were her troops, regular and volunteer, more meritoriously active. To many patients, no doubt, this busy interference made all the difference between life and death. But if the balance could be fairly struck, and the exact truth ascertained, I question whether we should find that the aggregate

mortality from cholera in this country was any way disturbed by our craft. Excepting always the cases in which preliminary diarrhea was checked, just as many, though not perhaps the very same individuals, would probably have survived had no medication whatever been practiced."

And elsewhere Dr. WATSON says: "Certain practitioners maintained that the disease was to be remedied by introducing into the system a large quantity of neutral salts, which were to liquefy and redden the blood, and to restore the functions of the circulation. But of this practice it was said, in sorry but true jest, that however it might be with pigs or herrings, SALTING a patient in cholera was not always the same thing as CURING him. * * * Some physicians put their trust in brandy, some in opium, some in cajeput oil, which rose, I know not to what price, in the market; some again to calomel alone."

Dr. MARSHALL HALL, of London, in a work on the Practice of Medicine, modestly says: "I do not venture to give an opinion upon the treatment of the Indian cholera." He, however, inclined to recommend the mercurial plan. And Drs. Bigelow and Holmes, of Boston, in adding notes to the work of Dr. Marshall Hall, remark, that "this disease has totally baffled the curative efforts of the medical profession in Europe and America, as the records of its mortality abundantly show;" that "no one can think otherwise who has seen much of the disease, unless in its most favorable and imperfect form."

Dr. BILLING, of London, in Principles of Medicine, says: "The slight or middling cases of cholera have a tendency, like ague, to remit of themselves; and hence,

whatever treatment had been adopted, the practitioner used to think he had cured them; and thus I have been repeatedly told by practitioners that they had found the true remedy for cholera. But the next time I met them there was a long face upon mentioning the specific."

And again he says: "If calomel be used in the quantity necessary to produce a sedative effect (the indication of treatment in the disease), it afterward produces havoc on the mouth."

Dr. Scouttetten, of Strasbourg, as translated by Dr. Doane, of New York, says: "Fear and credulity have eagerly received exaggerated or deceitful promises, which the experience of a day or a deceitful imagination have proffered with assurance. Thus, from the Indian empirics, who oppose the disease by burning with a red-hot iron that part of the heel where the skin is thickest, to the physician who advances that the best mode of preserving one from the cholera is to deny it existence, the employment of bismuth, calomel, large cataplasms of meal reaching from the head to the feet of the patient, camphor, corrosive sublimate, and twenty other more or less dangerous and ridiculous remedies have been advised."

Again this author says: "The incendiary treatment pursued by the English and most Indians, has multiplied the victims beyond all belief. They employ calomel, corrosive sublimate, cinnabar, quicksilver, ginger, cantharides, ether, and brandy in frightful doses."

In a late number of the Boston Medical and Surgical Journal, Aug. 30, 1848, edited by Dr. J. V. C. Smith, it is said in a leading editorial, that "the proper treatment of cholera is involved in the same uncertainty (as the generating causes of the disease), although every coun-

try where cholera has appeared, or its appearance is anticipated, abounds in medical directions for managing the disease with as much certainty as steam power is controlled by an experienced engineer."

Dr. Wood, of Philadelphia, in his Practice of Medicine says: "The plans of treatment which have been employed in epidemic cholera, are almost as numerous as the combinations of which remedies are susceptible; and, judging from the reports upon a great scale, there seems to have been but little difference in the results."

And again: "When a discriminating view is taken of the whole ground, and the published results of individual practitioners or individual institutions, in connection with the treatment employed, are compared, we find insuperable difficulties in coming to a just conclusion as to the most effective plan; great success being often claimed for the most different, and even opposite remedies, by their respective advocates."

Dr. Dunglison, of the same city, in Principles and Practice of Medicine, says: "Like all epidemics and contagious diseases, epidemic cholera affords a difficult problem for solution; and we are perhaps justified in adopting the following summary of a distinguished pathologist, M. Andral: Anatomical characters, insufficient; Causes, mysterious; Nature, hypothetical; Symptoms, characteristic; Diagnosis, easy; Treatment, doubtful."

Dr. Mackintosh says, that "no better evidence can be offered of the ignorance of the profession generally, as to the nature and seat of any disease, than the number and variety of remedies that have been confidently recommended for its cure," and that this was never better exemplified than in the cholera. Without pretending

to give all the remedies that were recommended for this disease, he cites the following catalogue, made out at the time it prevailed in the city of Edinburgh:

"Venesection (bleeding); cupping; dry-cupping.—Arteriotomy (blood-letting from the arteries).—Emetics of mustard, ipecacuanha, antimony, and sulphate of copper.—Calomel; colocynth, singly and combined; castor oil; croton oil; julap; opium; calomel and opium; fluid mercury; mercurial frictions; opium combined with antimony; opiate confection; colchicum; cajeput oil; peppermint oil; capsicum; charcoal; camphor variously combined; ether; mint tea; nitric spirits of ether; magnesia; milk; milk and magnesia combined; lime-water · alkalies; aromatic spirits of ammonia; Dover's powder; oxide of bismuth.—Various balsams.—Acetate of lead; nitrous acid; soda water; cold water AD LIBITUM; water prohibited; effervescing draughts; strychnia; various rubefacients in the shape of frictions, sinapisms, embrocations.—Various contra-irritants—as blisters, antimonial ointment; moxas; actual cautery; bastinadoing the feet! Cutting the throat! Suffocating under a feather bed! Injections of oxygen gas into the bowels! The application of heat in the shape of warm bath, fomentations; dry heat; the application of cold.—Galvanism.—Injections of beef tea, starch, and opium, chamomile tea, hot water, cold water, strong solution of fusible potash, tobacco, port wine, alcohol, sulphate of copper, acetate of lead, etc. Stephens' drug; saline injections into the veins."

Elsewhere Dr. MACKINTOSH says: "In the Drummond street (Edinburgh) Hospital, we fairly tried all the remedies recommended, but observed no advantage from a large majority of them."

Rubefacients and contra-irritants, that were so much used, according to the old and erroneous notion of drawing the blood to the surface so as to relieve internal congestions, Dr. Mackintosh deprecated. He never observed beneficial results in any case from these remedies, although the hot iron had been drawn all along the spine on each side, from the occiput to the sacrum.

And again this author remarks: "I have known many individuals destroyed when in this critical state (collapse), apparently by taking a laxative—even a small quantity of calcined magnesia—or an emetic." And again: "Heat was found greatly to increase the discomfort and jactitation (jerking of the limbs) in cholera."

After collapse, in cholera, there must be reaction—a return of warmth and general circulation—or there could be no recovery. This sometimes takes place. In precise keeping with the old Boerhaavean notion of stimulating in fevers, the experiment was often tried. Dr. Condie, of the Southwark Cholera Hospital, Philadelphia, remarked, "he had seen stimulants freely administered in the stage of collapse, but that, instead of a gentle heat of the skin, a gradual increase in the frequency and volume of the pulse, and a diminution of the burning sensation and uneasiness of the stomach being produced, all of a sudden there has been developed an intense burning heat of the surface, a dusky redness of the face, increased gastric (stomach) distress, great restlessness, which, after lasting a short time, have been succeeded by deep coma (stupor), low muttering delirium, dark colored flaky discharges from the stomach, subsultus tendinum, sometimes convulsions, and death." And he also remarks that, "internally, the only

remedy he had found not absolutely injurious in this stage, was powdered ice, or ice-water."

"The hot air bath," says Dr. P. C. Tappen, physician to the Park Hospital of New York, in 1832, "has not answered the expectations which were formed of it. It will very readily raise the temperature of the surface, but seldom influences the pulse, and, in the great proportion of cases in which it has been applied, the patient has died in a sort of colliquative sweat."

This same author, in speaking of the tobacco injection, says: "A means which has been known not unfrequently to cause death (see Christison and other works on Poisons), has been used in five or six cases, but the patients have all died in a short time after its administration. In one or two cases where spasms existed it seemed to produce some temporary alleviation; also in one case where the patient was extremely restless, tossing to and fro, and not complaining of any particular pain, except at the precordia (region of the heart), it seemed to produce at first some benefit; the patient was quieted, and sweated profusely, the extremities became somewhat warm, and the patient said he felt relieved. But extreme prostration soon followed, and he died in less than an hour. In three cases where it was used, it was preceded by the enema of brandy, but with the same unfavorable results." And later the same year, in making an official report, that, "in the use of tobacco, he was disappointed in every case."

Dr. Tappen says of mercurial friction in the Park Hospital, "it has been used in fourteen cases; many had at least a pound rubbed in, and the friction has been kept up faithfully for hours; all these have died except one." And this one was far from being well, we may

judge, for the report says, at the time it was made he might be considered in a state of convalescence.

The Philadelphia Board of Health, in a late report, admits that "no plan of treatment has been discovered by which the rate of mortality in confirmed cases of cholera can be lessened."

A late writer on cholera, Dr. Parkes, of London, makes the following admissions: "No medicine has yet been found which can counteract the changes in the fibrine, and nullify the first effect of the choleraic virus in the blood. The antidote to this tremendous poison has not yet been discovered, and the resources of modern European science have indeed, it appears to me, in many cases proved hurtful. The attempt to cut short the disease, and to rouse the system from a state erroneously compared to debility and to exhaustion, has certainly accelerated the progress of cholera." And again this author: "The list of remedies which have been used in cholera with this indication (that of counteracting the deeper and more important changes in the blood), comprises all the stronger medicines known to physicians at the present day, and, as it appears to me, no one medicine has been found more uniformly efficacious than another. The occasional mildness of an epidemic, or the use of a medicine toward the close, when the cases are less severe, have indeed conferred a temporary repute on certain remedies; but the next epidemic has invariably shown the boasted specific to be in reality as useless as any other, in the long array of medicines which have had an equally undeserved and equally transient popularity." And still again this author remarks, concerning remedies taken by the mouth: "I believe my assertion, that no one remedy is

more useful than another, in fulfilling the present indication (the one before alluded to), will be agreed to by every one. I gave, in a variety of ways, and in all stages, calomel, hemp, opium, camphor, quinine, creasote, tartar emetic, with and without opium, salines of all kinds, ether, hyosciamus, and, in fact, every medicine which could be obtained. Large doses of calomel, such as fifteen to twenty grains, were given in many cases certainly without benefit, perhaps even with positive injury. I observed in several cases that when calomel was given in large doses, or in small doses frequently repeated, at the time when absorption was possible, the algide (painful) symptoms seemed to be increased."

The learned Broussais says of the stimulating treatment, viz.: that by administering spirituous and alcoholic drinks, such as brandy, rum, gin, wine, not only pure, but impregnated and saturated with aromatics and irritating substances, such as cinnamon, nutmegs, cloves, musk, pepper, etc., "the mortality is frightful;" that "this treatment, compared with the physiological, is infinitely more dangerous, since it is attended with a much greater number of deaths;" and that "those who are cured by the stimulating mode still preserve a morbid state of the digestive canal, and even of the whole system, which continues through the rest of their life;" that "in those halls where the patients have been revived by means of stimulants, such as punch and brandy, they perish in great numbers, after having been carried into another hall as cured of cholera. They are reported in the bulletin as cured of cholera, and placed in a separate room as affected with typhoid fever, and nothing further is said about them; the attention of the physi-

cians is given to the new subjects that arrive, and the first are forgotten."

How could the stimulating plan have any other effect than to injure the system? For by this method one source of disease, viz., the stimulant, is superadded to the already existing disease.

An eloquent writer in the *London Morning Chronicle* (not a medical man, I suppose), speaking of the ravages of cholera in Paris, says: "Private subscriptions poured in on all sides; every imaginable precaution was taken by the authorities; the medical men made superhuman efforts, but no common method of treatment having been agreed upon, the most opposite systems were pursued, even in the same hospital or the same ward! The attendants had to execute directly opposite orders for cases perfectly identical; the patient who was dosed with punch saw ice given to the man in the next bed, and thinking himself used only as a subject for experiments, he died with rage in his heart!"

Concerning the practice of saline injections into the veins, Drs. Bell and Condie of Philadelphia, in their work on Epidemic Cholera, remark as follows: "Before resorting to so daring and hazardous a practice, we ought to ask ourselves whether, first, in the particular state of the patient at the time, there is no other remedial means which presents any fair chance of reviving him? And secondly, if this practice do not, though affording temporary relief, introduce fresh causes of subsequent disease, and more certainly seal the patient's final doom? The answer to the first question cannot be satisfactorily made, although we may be allowed to say that recoveries have been brought about by means apparently simple, such as assiduous frictions and the

bath, of persons who were supposed to be nearly moribund (a state like death), and whose only chance of life would seem by friends of the practice, to depend on injections into the veins. In reply to the second objection, we can say that death has followed in all of the few cases in which the practice has been tried in Philadelphia, and out of upward of thirty in New York subjected to it, only two have survived. In Edinburgh, where the injecting system for cholera seems first to have been tried, the cures are represented as five, and the deaths ten, of the patients on whom it was performed." And further on, these authors remark, "that sufficient time does not seem to have elapsed between the injections into the veins, and the publications of cures to justify our placing implicit confidence in the claims thus set forth. We had in the following day, and in one case for several days, similar annunciations of cure in this city, but the *vivas* for success were soon changed into regret for the death of the patient, if not for something else."

Drs. Bell and Condie add further, in a note, that "Dr. Anderson, of Rochester, England, details five cases treated by saline injections into the veins, of which he alleges three were successful. But what is the proof? He gives an account of two of the patients who died, one after 305 ounces, the second after about 190 ounces had been injected. Of the others he says, 'the additional cases were selected yesterday, and this plan of treatment adopted, and I am happy to add with the most decided benefit; they are all at this moment convalescent.'" "This" say Drs. Bell and Condie, "is trifling too much with his professional brethren; convalescent the day after the operation! How were they the following day,

dead or in health? The former is a more probable result than the latter. In the two admitted fatal cases, although reaction, as far as restored pulse and natural hue of countenance, was produced, an immense serous discharge continued to run from the bowels all the time."

And again these authors say, "that when reaction is fairly established, and the secretions restored by other modes of practice, does the patient slip off into death as after saline injections into the veins? We believe not, unless he has been grossly negligent of all advice."

ARTERIOTOMY.

In the more advanced stages of cholera, when the action of the heart and arteries almost wholly ceases; when no blood can be made to flow from the veins; when the skin is cold, and deluged with a cold, clammy sweat; when there is great difficulty of breathing and oppression of the chest; when there are the most severe pains and uneasiness in the region of the stomach, attended with excessive pain and confusion of the head, and intolerance of light and sound, arteriotomy, or blood-letting from the arteries, has been practiced. We cannot but admire the indomitable courage and persevering will of those practitioners who resorted over and over again to arteriotomy, and who, when occasion demanded, were ever most ready to be themselves thus practiced upon. But witness the horrors of the practice! The patient, pale, ghastly, appearing like a *living corpse*, with the peculiar cadaverous smell of cholera coming from the body, the wrist pulseless, and the vital functions sunk to the lowest ebb, witness then the hor-

rors of cutting open the arteries, even the large *carotids* of the neck! Well might Dr. Mackintosh say of this practice, with an exclamation point "CUTTING THE THROAT!" And what was the result? Why, in many instances no blood at all would flow from the gaping wound. Hear Drs. BELL and CONDIE on the subject of arteriotomy: "Besides the local bleeding by means of leeches or cupping, and those practiced at the arm and jugular vein with the lancet, recourse was had to arteriotomy in a number of subjects, who, it must be confessed, say the *Archives Génerales de Medicine*, appeared to derive no benefit from it. The temporal artery was opened by Magendie, Recamier, Gendrin, and several others; and by this means some spoonfulls of rose-colored blood, with impaired fluidity, trickled away as from a venous tube. In two subjects, it was determined to open the radial artery a little above the articulation of the thumb, where it is superficial and may be easily tied. It was then observed that this vascular trunk contained a feeble thread of blood, the motion of which was so much retarded, that the jet scarcely rose beyond the lips of the wound; the ventricular impulse was almost extinct, and to obviate hemorrhage, a simple compress and ordinary bandage was sufficient. The thin, plastic blood scarcely reddened the two or three turns of the roller which covered the wound of the artery: when reaction began to appear, there was no hemorrhage, properly so named, and ligature of the vessel was dispensed with as superfluous."

"The surgeons of Berlin," say these authors, "went a step further—a false step it may well be called. The brachial, and even the crural artery was opened; and it will scarcely be credited, that a distinguished sur

geon, whose name is concealed, ventured to open the carotid artery, because the other arterial trunks had furnished no blood. It is related that the latter arteries being equally deficient, the operator introduced a stylet into the aorta and left ventricle, to rouse it to new contractions. Death took place on these manœuvres, although the fact was denied by one of the admirers of this chirurgical hardihood; and there was not time to see the patient sink under hemorrhage."

We are told that blood-letting in the first stages of cholera, "when the pulse is free, and the temperature not reduced," is a serviceable remedy. Indeed, in medical parlance, such a practice "is often sufficient to cut short the disease." It would be a wiser mode, as well as more modest, to speak more guardedly in a matter of such importance. The wise old maxim, "that truth is a difficult thing to arrive at," does not any where hold more true than in the healing art. A patient in cholera, with "the pulse full, and the temperature no reduced," if that may be called cholera, is not in a very dangerous state, to say the least. But the fashion in medicine is, as it ever has been, "Do thus and so; if the patient gets well, the remedy has cured him; if he does not, he dies in spite of the remedy." This mode of reasoning, if reasoning it may be called, will do for some things—money-making, for example—but not for philosophy in the healing art.

Dr. Tappen, of New York, remarked of bleeding (see Cholera Hospital Reports), "I have never seen a case where I thought bleeding necessary in the early stages of the disease, although I can conceive that such cases have existed; but many cases have come under my observation in which bleeding has had a decidedly

injurious effect. Many patients have been sent to the hospital, who, just previous to the attack, were excited by debauch and large quantities of ardent spirits, then bled freely by some physician; the consequence was, that the patient very soon sank into a state of collapse; whereas, had they not been bled, I believe that many might have been relieved by administering alkalies." It is but justice, however, to remark, that Dr. Tappen believed in blood-letting in the congestive stage of consecutive fever following collapse. But there are other means now-a-days of keeping down fever—putting out the fire, as we may say—than by drawing out the blood a man has in him.

It is a sad thing to think of, that should the cholera again prevail among us, all of the horrible remedies, so called, described in the foregoing extracts, are to be tried over and over again; and besides, as many new inventions as may, by any possibility, be found out. If practitioners generally should resort to calomel, opium, bleeding, burning, and the like means as before, well might it be said, in the language of an old book, "If any man sin against the Most High God, let him fall into the hands of the physicians."

If we are to judge of the so-called science of medicine from its history in cholera, it may be said truly:

"Physic—a freak of times and modes,
Which yearly old mistakes explodes
For new ones still absurder—
All slay—their victims disappear,
And only leave this doctrine clear
That killing is no murder."

HOMEOPATHIC TREATMENT.

We are told on authority, the validity of which we have no right to question, that in the European cities the homeopathic treatment has been found far superior to the allopathic in cholera. This comparatively new mode, I hold, is mainly a *let alone* treatment. I know there are those of the new school who practice differently—those who would be more eclectic, as they say—who would, in short, "become all things to all men"—give large doses where large ones are best paid for, and small where small ones command the best price. There are mongrel homeopaths as well as the true—so say the advocates of this mode. But the genuine homeopathic treatment—I cannot believe that this has any material effect either way. But, says one, "How do you account for the great difference in the results between homeopathic treatment and allopathic in cholera?" I answer, I have great faith in the curative power of nature—the *vis medicatrix naturæ*, as scholars call it. I have great confidence in the efforts of nature to ward off disease, if she be left untrammeled to do her own work. Besides, the homeopathic ways of NURSING and DIET are admirable—incomparably better than those of the old school. The imagination, too—that ever-powerful agency—is also to be taken into account in this matter of small doses. Considering all these things, then, I am not at all surprised that the homeopathic treatment should far outdo the heterogeneous, contradictory, and often destructive modes of the old. In cholera, the first symptom of which is derangement of the stomach and bowels, let the patient at once abstain from all food, take pure, soft, cold water to drink, allow

the cool fresh air to circulate all about the body, at the same time avoiding all extremes and sudden changes; in short, following out precisely that course of nursing and general regimen which nature and an enlightened experience dictate, and I am certain that a much greater number would be cured than in the treatment by bleeding, calomel, opium, and the like horrible means. Nature, the mother of us all, is not that feeble, decrepit, worn-out old woman that people generally suppose her to be. In all cases it is NATURE that does the work of cure—art can only assist.

If time permitted, I might go on speaking at length concerning the *philosophy* of the different modes that have been adopted in cholera. The *evil effects* of blood letting, calomel, and opium, for example, might be extended into three separate lectures. These are terrible "engines" of the old school. I will not say they never do good. I know they often do great harm; harm even in the most experienced hands. *I* would not be bled, calomelized, or stupefied with opium. No, not so long as pure cold water could be obtained; a greater sedative—a greater anti-spasmodic—a greater anodyne, than each or all of them combined. Subdue my inflammation, relieve my spasms and pains, but do not poison my system, or take away my blood. Cold water, suitably applied, is the greatest and best of all agents for fulfilling these indications; and it leaves with you all your strength—and more, it increases it; and that is better than can be said of bleeding, calomel, and opium, which comprise the great "sheet anchor" of drug-treatment.

If the drug-treatment is found to be ineffectual for good in cholera and if the drug advocates are so per-

fectly at odds and ends, as I have shown by their own words, what are we to think of the treatment generally? If the "two-edged swords" of medicine are worth nothing in the great emergencies, can we not dispense with them well enough in the less? Does medicine deserve the name of a science, or even of an art? for art is supposed to have rules which are permanent and fixed.

I conclude this lecture by quoting certain sayings of Magendie, the celebrated French physiologist, on the existing state of the medical art.

"It is not a little remarkable, that at a period when the *positive* is sought in every quarter, the study of a science so important to humanity as medicine should be almost the only one characterized by uncertainty and chance."

"The end of all our efforts should be to study the *causes* of disease, and not their *effects*, as has long been done."

"The physician mixes, combines, and jumbles together vegetable, mineral, and animal substances, and administers them, right or wrong, without considering for a moment the *cause* of the disease, and without a single clear idea as to his conduct."

"I hesitate not to declare, no matter how sorely I shall wound our vanity, that so great is our ignorance of the real nature of the physiological disorders called diseases, that it would perhaps be better to do nothing, and resign the complaint we are called to treat to the resources of nature, than to act as we are frequently compelled to do, without knowing the why or wherefore of our conduct, and at the obvious risk of hastening the end of the patient."

LECTURE III.

The System of Water-cure; a Picture showing what it is.— Water one of the Leading Constituents of all Living Bodies.—The Human Body composed mostly of Water.—Life may be Sustained for weeks by Water alone.—Facts in proof thereof.—Water assuages Hunger.—Remedial uses of Water.—Animals take to Water when poisoned. Boerhaave's theory of Fever.—Stimulating practice in Fevers and Inflammatory Diseases wrong.—The cooling Regimen the most natural and the best.—Water the greatest of all Tonics.—Facts from Howard.—Dr. Baynard.—Dr. Hancock.—Dr. Adam Clarke.—Sir John Floyer and Dr. Baynard.—A Fever case.—Cold Water in Scalds and Burns.—Medical authorities on the use of Water in Cholera.—Neglect of Bathing in Medical Practice generally.—Water treatment in Cholera.—Diarrhea preceding Cholera.—How to be Treated.—The great Thirst in Cholera.—Warm Water-drinking.—Cold Water with Calomel.—Cold Water promotes the Circulation.—Hot Water in Cholera.—Vomiting and Discharges from the Bowels.—Warm Water-Injections.—Vomiting by Water.—Injection of Warm Water into the Veins.—Hot Applications externally, bad in Cholera.—Spasms, how relieved.—Cold Perspiration in Cholera.—Stage of Collapse.—Priessnitz's Treatment of Cholera.—The Persian Treatment.—Difference between Water and Drug-Treatment.—Conclusion.

Let us suppose that this great city of New York were spread over ten times its present space—or, for instance, over the whole of Manhattan Island—and that every house has a definite amount of area about it for gardens, walks, etc., so that good air circulates everywhere. There is no "Five Points" here; no slaughter-houses with their unclean and pestilential emanations; no drinking saloons of either high or low degree; no dens of infamy, the darkest curses of Christendom, whether of ancient or modern date. The people are "temperate in all things;" so temperate, indeed, that they are water-drinkers, regarding tea and coffee, the common beverages of mankind, as pernicious; in no respect so good as that "best of all drinks." Tobacco is held to be a positive poison, instead of a "delectable weed." Temperance and industry, virtue and honesty,

are the laws. Wealth does not ride rough-shod over poverty, but all perform some kind of honest toil. The poor are not overtasked; the rich labor to insure health. The people do not turn day into night, or night into day —for such a practice can never be consistent with health. Cleanliness is considered next to godliness—not less in a physical than moral sense. Now I have drawn this picture to show you something of what would be the condition of a people living according to the rules of the water-cure, so called, and to show you that the system is not a "one remedy," as many suppose. The Germans have a name for every thing. In the new method, water—pure, clean water—is the great medicinal agent; but yet the system includes all the particulars of air, exercise, clothing, ventilation, cleanliness, bathing in all its forms, food, drink—in short, all the natural means of preserving, fortifying, and invigorating the general health.

In the last lecture, I spoke mostly concerning the drug-treatment of cholera, showing you from the best authorities—by their own words—the inefficacy of that treatment. To-night I am to speak of the water-treatment as applicable in that disease.

WATER AND LIFE.

Water is one of the leading constituents of all living bodies; no living thing can exist for more than a short period without it. If water in large proportions were not constantly present in the human body, the food would not become digested in the stomach; no chyme could be elaborated to supply the chyle, or chyle to form the blood. Respiration, circulation, secretion, nutrition

perspiration, elimination—neither of these could go on in the living body without the presence of a large proportion of water.

The human body, as a whole, is composed in weight of about ninety parts in the one hundred of water. A body weighing one hundred and twenty pounds, being dried at a high heat, loses all of its weight but twelve pounds. Even its dryer portions, as bone, cartilage, ligament, muscle, contain a large proportion of this fluid. The blood, and the brain, that most important of all the organs of the human body, are made up almost wholly of this simple element.

LIVING ON WATER.

The living body may be compared to a perpetual furnace, which has a tendency constantly, by evaporation, to become dry. Its natural temperature internally, 98° Fahrenheit, is much above that of the surrounding objects of nature, and hence this result. If all food and water are for a length of time withheld from the animal, he becomes parched and feverish; in a few days, at most, delirium supervenes, and if the experiment be continued any considerable time, death is the inevitable result. A human being dies in about three weeks without food or water; but if the indication of thirst is answered by a free supply of pure soft water, the individual lives more than twice that length of time.

In the "Transactions of the Albany Institute," for 1830, Dr. McNaughton relates the case of one Reuben Kelsey, a religious maniac, twenty-seven years of age, who lived on water alone for fifty-three days. The first six weeks he was able to walk out every day, and

sometimes spent a great part of the day in the woods. His walk was said to be steady and firm, and his friends even remarked that his step had an unusual elasticity. He shaved himself until about a week before his death, and was able to sit up in bed to the last day. There is also a well-authenticated case of a "*crack*-brained" man at Leyden, who pretended that he could fast as long as Christ did; and it was found that he held out the time of forty days without eating any food, only he drank water and smoked tobacco, which last practice, of course, only injured him, except in the way of amusing the mind.* And in the Boston Medical and Surgical Journal, Dec. 13, 1848, Dr. W. V. M. Edmonson, of East New Market, Md., gives an account of a gentleman of that vicinity, aged eighty-five years, who had lived, eschewing all nourishment except air and water, for forty-three days and five hours. His bowels were moved the first twenty days once; the next fifteen days, twice; the remaining eight days, three times. He had been indisposed for some ten days prior to the period of fasting. He was a man of industrious habits, frugal, and temperate.

In the old country, where food is often scarce among the poor, persons suffering with the cravings of hunger have learned that water is an excellent means with which to combat the horrors of famishing. The old writer on water, John Smith, of England, tells us that he once had a sad complaint from a poor old woman of the greatness of her want, affirming that oftentimes she had not eaten any food for two or three days; upon which he asked her if she did not then suffer much un-

* See Curiosities of Common Water. By John Smith, C. M. London: 1723.

easiness in her stomach; she answered she had, but at last found a way to assuage her hunger by drinking water, which did satisfy her appetite.

Cruel and unwarrantable experiments have been made upon animals, to prove what was already sufficiently apparent—the great influence of water in sustaining life. Thus, barn-yard fowls have been kept without either food or water, and are found never to pass the ninth day; but if water be furnished them freely, they live to the twentieth day. These are interesting experiments; but none except worse than barbarians can repeat them. These facts I have given, to show you the dependence of life upon water. Many more might be given on the same point, but these will suffice.

REMEDIAL USES OF WATER.

Let us look, secondly, at some of the *remedial uses* of water.

Whenever a general feverishness, from whatever cause, is brought on in animals, they not only instinctively drink water, but immerse themselves in it, if it is possible for them to do so. It is said that in some countries wild pigs become violently convulsed by eating henbane, and that by going into water, and by drinking it, they recover. And when animals become feverish from mutilations or mechanical injury, they seek lying upon the damp ground in the cool air, and even in mud and wet, and go not unfrequently into the water. Long ago it was ascertained in England, that when Canary birds had convulsions, to which they were subject, immersion in cold water generally effected a cure. And a lady informed Sir John Foyer, that when her lap-dog

had convulsions, "'twas cured of them by being thrown into a tub of water."

Rats, all housekeepers know, go at once to water, when they have swallowed arsenic that had been set for them; and hence, too, it is well known that water must be kept out of their reach; otherwise they are very apt to recover from the acute gastritis caused by the poison. Domestic animals, as cats and dogs, when poisoned by arsenic that had been set for rats, take at once to lapping down great quantities of water, and are thus sometimes apparently saved. I knew a fine old pointer-dog in the city of New York, that, after he had been nearly beaten to death by the barbarian dog-killers, went for days without food, but lapped often large quantities of water, and was thus saved.

BOERHAAVE'S THEORY OF FEVER.

Boerhaave, the most learned physician of his time, held as a theory that fever was caused by a *lentor* (something cold) in the blood. This theory—for it was only a theory—caused, for about two centuries, one of the most erroneous modes of practice that ever crept among the already multiform and barbarous jargons of the medical art. Alas! what erroneous theories and practices which the human mind could by any possibility invent, have not been put forth to torture human nature with? Every one of you that has arrived at adult age, can well remember how, a few years since, no fever patients—none with inflammatory disease of whatever kind—could touch a drop of cold water, at the peril of life. "It will be the very death of you," exclaimed the practitioner. The anathemas against no

poison could be more imperative than this against pure cold water in fever. Now and then, however, there were those who, spite of physicians, nurses, and attendants, broke over all bounds in their frenzy, and betook themselves to this best of all remedies. And what was the result? Were these patients killed by the dreaded element? All of you know the proper answer to the question. And now, thanks to Priessnitz, the temperance reformation, and the light of advancing science, this horrible practice of which I have been speaking is consigned forever, I trust, to be remembered only among the things that were.

WATER THE GREATEST OF ALL TONICS.

Water is nature's great invigorator, the most genial and yet most powerful of all tonics. There is nothing in all the world beside, to compare with it in giving life and energy to the frame. It has been said poetically of that vast expanse of water, the ocean, "It is the breath of God condensed on what were otherwise a cold and barren mass of rock—a breath which has communicated fertility, and beauty, and life." When struck down with severe disease, the strength all exhausted, and the individual unable to move, there is not in all nature beside, any substance, or any combination of substances, that has a tenth part the vivifying and life-giving power of water.

"I might mention," says Howard, the philanthropist, "as an evidence of the advantages of baths in prisons, that I have known instances of persons supposed to be dead of jail fever (*typhus gravior*, or malignant typhus), and brought out for burial, who, on being washed with cold water, have shown signs of life, and soon after re-

covered." And when at the county jail of Hertfordshire, Howard was told of a prisoner who, on being pumped upon in the yard when in a state of apparent death from jail fever, recovered; and he afterward declared he had known other instances of a similar kind. When he was in Turkey, a young man was shown him in one of the prisons, who had been bastinadoed so severely, that his body was swollen from head to foot in a most shocking manner. He desired the people to bathe him in cold water; and this, with some other simple means, such as a cooling diet, effected his recovery, contrary to the expectations of his keepers.

"In the year 1665," says Dr. Edward Baynard, "I very well remember that it was the talk of the town, that a brewer's servant at Horseleydown, in Southwark, was seized with the plague, and in his delirium ran into a horse-pond, first drank his fill, and then fell fast asleep with his head upon the pond's brink, where he was found in the morning. How long he had been in the pond nobody knew, for it was in the night he went into the water, and had no nurse then with him; but he recovered to a miracle."

Dr. Hancock, also an old writer on water, gives an account of a woman "who in the great plague of London, obtained through her husband a pitcher of water from Lamb's conduit, and drank plentifully of it, not avoiding the cold, and so did not sweat, but was however cured."

Every one who has read the autobiography of Dr. Adam Clarke, will recollect how, when a lad, being confined in a hot room and feather bed, suffering at the same time an attack of inflammatory disease, he ran

nd betook himself to the snow, and was thus greatly benefited.

There is an old English work on water by Sir JOHN FLOYER and Dr. EDWARD BAYNARD, written about one hundred and fifty years ago, in which many cases of remarkable cure by water are given. One or two from Dr. Baynard, a "regular" practitioner, very quaint and sarcastic withal, I will give:

"A Turk (a servant to a gentleman), falling sick of a fever, some one of the tribe of treacle-conners being called in, whether apothecary or physician, I can't tell, but (according to custom), what between blister and bolus, they soon made him mad. A countryman of his, that came to visit him, seeing him in the broiling condition, said nothing, but in the night-time, by some confederate help, got him down to the Thames-side, and soundly ducked him. The fellow came home sensible, and went to bed; and the next day he was perfectly well This story was attested to by two or three gentlemen of undoubted integrity and worth; and I doubt it not, but believe it from the greater probability; for I'll hold ten to one on the Thames-side against treacle, snake-root, and all that hot regimen which inflames and exalts the blood, breaks its globules, and destroys the man. And then, forsooth, the doctor sneaks away like a dog that has lost his tail, and cries, it was a pestilential, malignant fever, that nobody could cure; and to show his care of the remainder, bids them open the windows, air the bed-clothes, and perfume the rooms for fear of infection; and if he be of the right whining, canting, prick-eared stamp, concludes, as they do at Tyburn, with a mournful ditty, a psalm, or a preservative prayer for the rest of the family So exit Prig, with his starched,

formal chops, ebony cane, fringed gloves, etc." Thus much for Dr. Baynard and his criticisms on doctors.

COLD WATER IN SCALDS AND BURNS.

Witness the effects of cold water in burns, and you have an evidence of its superior power over that of every other remedy to cure an inflammation. Every school-boy that burns his fingers upon the stove, knows better than the doctors how to treat it. If it be in the winter time, he fills his pockets with snow-balls to cure his burn, even at the expense of being flogged, if his more ignorant teacher should find him out. Great writers on medicine and surgery tell you, that cold water, although so agreeable to a burn at first, makes the pain worse afterward. But the school-boy improves upon the method of the learned doctors, BY KEEPING ON WITH THE APPLICATION UNTIL THE FIRE IS ALL DRAWN OUT. Draw out the fire and the pain does not return at all; and more than this: no blister can raise under cold water if long enough applied. If the surface has been destroyed, you have an ulcer to heal, but no blister; and water also rightly applied is the best of all *poultices* for ulcers, as well as scalds and burns.

Let us look now briefly to the principal medical authorities as touching the effects of water in the treatment of cholera, merely premising here concerning the philosophy of the action of water in this disease, that there is no malady in which thirst and heat, internally, are so great as in cholera, and that consequently there is no known disease in which so great quantities will be taken, or in which water is so grateful to the patient as

in this. Even when the breath and the whole surface are cold, apparently, as death, the cool fresh air, and coolness generally, externally as well as internally, are constantly desired by the patient; and as a consequence of this natural instinct for cold, an instinct which should be gratified in all legitimate ways, there is in cholera a great dislike, repugnance even, to warm and hot applications of every kind. These I have already shown by good authority, do no good; only harm the patient.

Dr. DUNGLISON, of Philadelphia, in Principles and Practice of Medicine, says: "The intense thirst of cholera must be satisfied with a liberal allowance of cold water; nor need the quantity be limited. There can be no doubt that ice and ice drinks are most grateful. Ice frequently allays the irritability of the stomach, which is a symptom demanding attention from the distress it causes."

Dr. WOOD, of the same city, in Principles and Practice of Medicine, recommends cold drinks to be given. little and often. "A little very cold water every now and then, or small pieces of ice, will be found very grateful to the patient. Whatever liquids are administered should be cold, as heat increases the thirst and already intolerable burning of the stomach."

Dr. SCOUTTETTEN, of Strasbourg, speaks of M. Gravier having learned from an Indian doctor, named Russendren, a very sensible man, that individuals who drank fresh water recovered from the cholera; that of a certain number that were treated, twenty drank cold water from the commencement, and were cured in from twenty-four to thirty-six hours. Again, M. Gravier, when admitting that a great mass of liquid would tend

to cause vomiting, a fact which every one may prove for himself, remarks judiciously, "that if cold water is taken in small quantities, and at proper intervals, the stomach can bear it well. Experience proves this every day and there are but few practitioners who do not use cold and ice water when they wish to combat stubborn vomitings."

The FRENCH ACADEMY recommended, in 1831, ice and cold drinks to arrest the vomitings in cholera.

Four years ago the present winter, being on a professional visit to Philadelphia, I happened in at a lecture of Professor Chapman, of the University of Pennsylvania. The professor spoke in part that day on the cholera; and in closing his remarks, he used language in substance like the following: "Gentlemen, after all that we can tell you about the cholera, should you ever be called to treat a case of that fearful disease, you would know as well how to proceed as if you had seen it as much as any of us, so conflicting were the theories and modes of practice adopted by the profession. We know nothing about it. But, gentlemen, it appears to me that the best treatment which I had any knowledge of, was to let the patient have as much ice and iced water as he desired; and it is astonishing what quantities were taken." Here also we have a very candid admission, from one of the ablest professors, and in the most celebrated medical school of the "Medical Athens" of the United States.

Dr. BILLING, of London, in Principles of Medicine, speaking of the remedies for cholera, remarks: "Any person who will treat the disease on principle, may defeat it by a variety of weapons, only using them with energy;" and among the articles recommended, he makes

the remark, "even cold water;" and then says in a note: "The constant desire for cold water in cholera, is an example of natural instinct, which is thwarted by man in his wisdom; while every thing hot, both as to caloric and stimulants, is often poured into the patients."

Dr. Elliotson, of London, in Practice of Medicine, says: "Cholera patients feel intense heat within, and intense thirst; and they find great comfort from cold drinks. I understand that in Vienna the custom was to allow ice, which the patients took with great avidity, and derived great comfort from it."

Dr. Tappen, of New York, in Hospital Reports on cholera, says: "When the disease is approaching to collapse, in addition to the above treatment (by calomel, etc.), I employ the means for restoring heat more actively, *and give ice freely*, directing the patient to chew and swallow it as fast as possible; it is found to cause reaction when thus given more speedily than any other remedy I have seen employed; and it has the additional advantage of being very grateful to the patient, and is also one of the most effectual means of allaying thirst, and relieving sickness at the stomach and vomiting."

Dr. Mackintosh, of Edinburgh, who also had much experience in the treatment of cholera at Drummond street Hospital, in Principles and Practice of Medicine, says: "Cholera patients suffer from intense thirst, and their anguish always appeared greatly increased if they were restricted as to the quantity of liquid. In the Drummond street Hospital every method was tried, viz., by restricting the quantity of liquid; by allowing a moderate quantity, or affording an unrestricted supply; and we came to the conclusion, that the last was the best method." And Dr. Morton, of Philadelphia,

In his notes on Dr. Mackintosh's Practice of Medicine, remarks: "Broussais found nothing so good as ice in the treatment of cholera;" he further says, "that in the cold stage he began with hot drinks, but soon abandoned them for ice itself. It is now adopted every where, the patient being directed to keep small pieces of it almost constantly in his mouth during all the stages of the disease. It reduces the irritability of the stomach, quenches thirst, and alleviates the general distress of the sick."

Drs. Bell and Condie, in their work on cholera, when speaking concerning the question whether it is proper or safe to apply cold to the skin when it is already cold, sodden, and wet with sweat, as in the most formidable and advanced stage of cholera, remark, "that this practice has been adopted, viz.: frictions with ice over the surface of the body, or affusion for a minute of cold water, of a temperature of from fifty-eight to sixty degrees Fahrenheit. The former is stated in the report of the French Academy of Medicine, to have been serviceable in relieving cramps, and we have just learned that, in an apparently hopeless case of collapse, or blue stage, in this city (Philadelphia), it was had recourse to advantageously." "The cold affusion," these authors also remark, "is a practice of Recamier in the blue stage. We are told that after the patient has been dried and put in a warm bed, the skin is soon covered with sweat;" and as collateral testimony, "that Samoilowitz employed this remedy with success in some cases of plague at Moscow, in which the patients seemed to be beyond the reach of art."

Dr. Parkes, of London, says: "Cold to the surface was a measure much more grateful to the patients than

warmth. This might have been anticipated, also, from the way in which the bed-clothes are thrown off, so as to expose the surface freely to the fresh air. The cold affusion, even in the last stage, two or three hours before death, sometimes caused the pulse to become again perceptible." A good omen, certainly, because the stimulation caused by water is not followed by depression, as is the case with all drug stimulants. And this author also remarks, that "cold drinks as well as cold affusions are grateful, and should be freely allowed, if they do not produce vomiting."

It is to be here remarked, that the use of cold water *externally* has been but little resorted to in cholera. The coldness of the surface and the cold breath of cholera patients, have been a stumbling block to physicians. Medical men generally know very little concerning the action of water on the living system—scarcely more than the old women, who all know that cold water is cold, and warm water warm. Physicians do not understand that cold water may be used to fulfill a variety of indications; that it may be made, at pleasure, now an emetic, now a cathartic, now a sedative, now a tonic, now a stimulant, now an anodyne, and now an antispasmodic. Water is supposed to be only one of two things, accordingly as it is used; a means of applying heat, or a means of applying cold.

It is strange to witness, in hospitals, the great neglect of bathing and cleanliness. Look at cholera patients, for example; poor creatures, many of them, who have never, for the first time in their lives, been clean. Greasy filthiness is glued in, so to say, upon every part of the great surface. First of all, you see the patient bled, or dosed with calomel, opium, brandy, and what not, ac-

cording to the fancy of the practitioner—but no baths. One of the greatest and most accessible organs of the whole system, one of the best upon which to apply remedial means, is left wholly neglected. Strange indeed is it, that among men of learning such things exist. But there is a hope in the matter; for ere long things MUST become changed. Water, the greatest and best of all curative agents, is destined to take its proper place in the healing art.

I come now to speak more directly concerning the water-treatment of cholera. You will recollect, that the disease is preceded by more or less disturbance of the digestive organs, and that there is usually preliminary diarrhea. Then come on also the great thirst, the vomiting and purging of the "rice-water fluid," the most terrible spasms, the sinking of the circulation, the cold sweat, and the collapse. First, then, of the

DIARRHEA PRECEDING CHOLERA.

The diarrhea which so generally precedes the real attack of cholera, should be treated like any other diarrhea, on general principles. It would be better for the individual to practice entire fasting from all food—the *hunger-cure*, as the Germans call it—until the diarrhea ceases. The human body, as I have said, is composed of about nine-tenths water, in its best health; therefore it is that pure water alone will sustain it so wonderfully for days and even weeks. Barn-yard fowls, as before remarked, when kept without food, will not survive the ninth day if they have no water; but with water they will live more than twice as long—to the twentieth day. If you wish to cure a diarrhea safely, effectually, and

without harm to the constitution, practice fasting, and live on pure soft water until it ceases. Then begin taking food with extreme caution; at the regular meal-times only, and an exceedingly small quantity at first. Some will tell you that fasting produces disease, but physiology and pathology prove that neither fasting nor starvation causes any such result. The individual who is starved, having at the same time water to drink, dies of mere *inanition*, and not of *organic disease.*

According to the Graefenberg plan, the cold hip-bath, cold water-drinking, injections, pure, fresh air, and the famous wet girdle of Priessnitz, are the means to be used; and these may be employed in connection with the fasting recommended.

THE GREAT THIRST IN CHOLERA

Is one of the most troublesome symptoms, and, according to all experience, it is one of the most grateful things imaginable for the patient to be allowed all the cold water he desires. There is no disease in which thirst is so great—none in which so much cold water is drank. Some thought that cold water did harm in certain cases. So it might, if the water were hard and bad, or if the patient had been kept long from it, or, especially, if he had been over-drugged. In all cases of inward feverishness and thirst, it is of the greatest importance that the water be *pure* and *soft.* If people would take half the pains respecting water that they do in obtaining tea and coffee, they might have at least an abundance of filtered rain water, which is always a luxury, and remarkably favorable to health.

In 1831 and 1832, the practitioners of Europe and

this country did not agree upon this matter, at least not for a time at first. But at length the large majority came to believe in the free use of water and ice internally, to gratify the longings for drink. But there is a reason why some men might make a mistake in regard to their conclusion, as to whether the ad libitum use of water internally were safe in cholera; it is this: in certain states and conditions of the stomach and alimentary canal, *water appears to increase vomiting*. Thus I can conceive that a cholera patient would often be made to vomit worse on taking water, especially if it had been withheld from him. But we are not to infer from this that the water is necessarily bad. In poisoning, for instance, a patient may drink and vomit gallons of water, and yet when the offending cause is removed, the vomiting ceases. Causing a sedative effect upon the stomach—and water is one of the most effectual of all means possible by which to bring about this indication—is the best possible means of finally arresting vomiting from whatever cause. Give the patient, from the first, all the cold water he desires, and the stomach will take care of its own vomiting. Small pieces of ice held constantly in the mouth and often swallowed, is believed by many the best mode of managing this symptom. The most judicious rule, I think, would be to consult the patient's inclination. I should not fear to let him drink all he desired; if the vomiting were increased at first, that would be no harm.

WARM WATER-DRINKING.

Even warm water, that is, water as warm as the blood, viz., 98° Fahrenheit, would be incomparably

better than no drink at all. It would serve to dilute the acrid matters within the stomach and bowels, and the morbid fluids pouring out upon the mucous membrane generally, and thus much good even from warm water would be caused.

WATER-DRINKING WITH CALOMEL, ETC.

When calomel and other powerful medicines are administered, water having for a time been denied the patient, I think a too free and sudden use of cold water internally, might in some cases do harm. There is no need of going to excess in this matter; the thirst may be soon enough quelled without doing violence to the system. The common doctrine of physicians now is, that water may be taken with the utmost freedom while under the effect of mercurial medicine.

COLD WATER-DRINKING PROMOTES THE CIRCULATION.

Some writers on water, as Dr. Bell, of Philadelphia (see Bell on Baths and Mineral Waters), hold that cold water is necessarily always a sedative to the system; that is, it acts to lower or depress the heart's action. But this is not always so; cold water and ice promote circulation (action of the heart and arteries) under some circumstances, as in the sinking stage of cholera. Does not every one know that cold water, both internally and externally, is one of the best *revivers*—stimulants, we may say—in fainting and sinking from whatever cause. You recollect Howard's cases of persons being revived by cold water, when they were supposed to be dead, and probably would never have recovered if the cold water

had not been applied. Similar results were found to take place in some instances of cholera. Broussais tells us, that in the Military Hospital of *Val-de-Grace,* in Paris, there were instances of the revovery of patients in asphyxia, by cold water. "We have had instances," he says, "of the recovery of patients who had become black or dark colored, and this has been owing to the use of ice and cold drinks."

Formerly there were many and various opinions as to whether diluents were to be allowed at all during an attack of cholera. It is conceded on all hands, that the great desire of the patient is for cold drink. I can believe that warm drinks, and even hot water, pure and soft, as a diluent, would be much better than none. In cholera, the fluids of the system are pouring off tremendously from the stomach and bowels. Now the living body, being composed of so large a proportion of water, about nine tenths, must have a frequent supply from some source ; and especially when the fluids are passing off with so great rapidity as in cholera. Therefore it would doubtless be better to give even hot drinks—not, however, so hot as to do great violence to the system—than to withhold all fluid, or very nearly all, as was the practice of some. Dr. Sturm, a surgeon of the Polish army, is quoted by Drs. Bell and Condie, as saying : "The treatment we now employ (at Kamienka), is nothing else than giving the patient as much warm, nearly hot water, as he is able to drink, in the quantity of a glassfull every fifteen or thirty minutes. By the time he has taken fourteen glasses the cure is complete, with the exception of a slight diarrhea, which it is not proper suddenly to suspend. The effects of this plan of treatment are so quick and effectual, that in two hours,

or often sooner, the patient is well, particularly when it is commenced with sufficiently early.'

The drinking of water and the use of ice internally—any thing, in short, that produces a sedative effect upon the abdominal organs—will tend to arrest the vomiting and discharges from the bowels. Bathing also has the same effect, but more particularly the long-continued cold hip-bath. This is Priessnitz's great means of arresting all unnatural discharges from the bowels. Mean time, also, cold injections are to be used. These cause a constringing effect, and act, also, as a tonic to the general system. All internal applications of cold water act by dilution as well as coolness, rendering morbid matters less acrid, and, by the water-purging, it also carries off these humors of disease. The wet girdle Priessnitz uses between the periods of the hip-bath. This is, at least, three yards of good heavy linen toweling, one half its whole length wet, to come next the surface, and all well wrapped about the abdomen. It is a great tonic to the general system, as well as astringent to the stomach and bowels, in arresting the discharges.

"In the stage of collapse," say Drs. Bell and Condie, "large injections of warm water have been much used in the north of England, and with a very encouraging result. Mr. Lizars directs the water to be as hot as the hand can bear—in quantity of three or four pints, with a tea-spoonfull of laudanum." Of this application it may be remarked, that, like many other prescriptions of water in medical books, it is faulty in the particular, that the *temperature* of the water is not mentioned. Water, when above seventy or eighty degrees Fahrenheit, appears warmer to the external sensations than it really is. Thus water at the temperature of the blood,

viz., ninety-eight degrees Fahrenheit, appears to be quite hot, so that there is room for doubt as to the real degree of temperature, when sensations merely are taken as the guide. On the principle that stimulants internally are a source of uneasiness to the patient and unfavorable in effect, we have reason to believe, if not positive proof, that water alone would be the best. "The plain hot water," say the authorities quoted (and the method was to repeat the application hourly, or as often as the symptoms demanded), "was found more efficacious in relieving the spasms and collapse than laudanum."

Priessnitz always uses the injections cold; and these are best, for cold has an astringent effect in arresting all discharges from the bowels.

Vomiting by water may be serviceable in cholera. Some practitioners have observed, strange as it may appear, that emetics serve to arrest vomiting in this disease. Vomiting by means of water—that is, vomiting caused by drinking quickly a large quantity of blood-warm water—a quart or more—is often very useful in derangements of the stomach and bowels. Spasms of the stomach I have known arrested immediately by this simple remedy. I am confident that a thorough cleansing of the stomach with luke-warm water in this way, would often be a most excellent remedy in the early stages of cholera. Vomiting thus practiced, acts partly by removing offensive matters from the stomach, partly by promoting a better circulation toward the surface, and partly by inducing a healthful perspiration upon the skin. This is a perfectly safe remedy, and is certain of doing some good. In fits of dyspepsia caused by surfeiting, the vomiting will be found most excellent. This advice

may apply especially to those who cannot control their appetites, but would rather feast and gorge themselves, even at the expense of health.

All the internal applications, when properly made, do much good, by supplying serum for the blood. The great and copious discharges from the stomach and bowels rob the blood, with most fearful rapidity, of its watery part. Water, by drinking and by injections, as well as externally applied, goes directly to make up this deficiency; and hence the great benefit from the free use of water in this disease. It is to be remarked, also, that the greater the thirst, the more rapidly is water absorbed into the circulation by the mucous membrane of the stomach and bowels.

The injections of warm water into the veins was believed by some to be of great service in cholera. Dr. Watson, of London, elsewhere quoted, tells us of a woman who was for some time a nurse in the Middlesex Hospital, and who had been rescued, when at the verge of death in cholera, by the injection of warm water into her veins. But the practice of injecting the veins is always a hazardous one, because of the liability of introducing air at the same time. Air in the veins is death to the patient. The reason why water does so much good when introduced into the veins, is apparent from the fact, that the blood in cholera loses a great proportion of its serum or watery part. Supply this, and the patient is certain of reviving for the time, although he might not in the end recover. But if a patient can be revived, even for a short time, it might be a very desirable thing, as in case of making a will, or in giving directions about other worldly matters.

Experience proves—those tell us who have had the

disease to treat—that heat externally applied is productive of no benefit. It does no good to attempt to warm the patients. The general effect of heat is to debilitate; and the fact that cholera patients always dread hot air and hot baths, is proof enough why these should not be used; the constant desire in the active stages of the disease is for coolness, fresh air, and cold water to drink. I would not be understood as saying, that heat internally applied, by means of water, which produces at the same time various other effects than merely those of heat, can do no good. But the desire for coolness generally, in the active form of the disease, is, beyond doubt, the normal indication of nature, such as an animal would naturally seek to gratify.

Spasms in cholera are best relieved by the vigorous application of the rubbing wet-sheet. Have a linen sheet of good weight (but cotton will answer), wring it only slightly out of cold water, and put about the whole body, rubbing at the same time energetically, over the sheet and not with it. This is a famous application for bringing the blood to the surface, and of relieving spasms and cramps from whatever cause. In three or four minutes the sheet becomes warm, upon which it is again re-wet, and applied as before. Water by this application becomes a great antispasmodic.

It was found in the hospitals of Paris, that dry friction alone was often effectual in quieting spasms beyond any ordinary remedy; but wet friction is much the best.

The cold perspiration in cholera may be greatly relieved, if not wholly prevented, by ablutions. This is a symptom of debility, and the tonic effect of water to the skin is a sure preventive. In the night sweats of consumption, the same effects are caused by baths.

You may ask, "How would you treat a patient in collapse; the surface cold and pallid, and the pulse gone?" That is a difficult question. If cold water is known sometimes to restore persons, who appeared to be dead, of jail and other putrid fevers, as was seen by Howard, and if cold water will quickly rouse a drunken man from stupor, we ought not to give up too soon in cholera. Cold water is incomparably the greatest of all tonics; therefore I would use it perseveringly, and in a variety of ways, to the very last. When I have had the disease to treat, then I can tell you more about it. I will leave for small men to herald forth their "specifics" and "infallible cures," who have a greater desire to see their names in print, than to know and tell the honest truth. The oldest and wisest men will find their preconceived theories modified in a greater or less degree when they come to meet the disease hand to hand.

In 1831, there was much cholera about Graefenberg, considering the number of inhabitants there. PRIESSNITZ cured, he tells us, upward of twenty cases, being all that he had the opportunity of treating. He commenced in the first stages of the disease, and treated the patient as follows: they were subjected to a rubbing with a wet linen sheet, in which the whole body was wrapped, and all the parts of the surface were energetically rubbed with it—that is, over the sheet. To counteract the violent fits of nausea, much water was drank, so as to produce vomiting; after the rubbing, a cold water-injection and a cold hip-bath were employed, to counteract the diarrhea; and while undergoing constant rubbing of the surface, the patients remained in the water till the sickness and diarrhea subsided. After the hip-bath and rubbing, a wet bandage or girdle was placed

around the body, upon which the patients went to bed; after sleeping they were again put into a cold bath. Cold drinks and cold food only were taken during the convalescence; and by these means the disease was overcome.

This appears like a very simple treatment; but it may be made a most energetic one, as every physician acquainted with such applications can easily see. The dripping sheet, with the brisk rubbing upon its surface, is, as I have before said, a powerful means of relieving spasms, arising from whatever cause. The dry rubbing, which is not a tenth part as good as the wet, was found in Paris sufficient to render calm and quiet the poor sufferers, when the terrible spasms were upon them. The water-drinking and vomiting in nausea cleanses the stomach, produces a tonic effect upon its internal surface, and thus forestalls the vomiting in cholera. It helps, moreover, to cleanse the bowels and prevent the diarrhea. The deep, cold hip-bath (for it is such that Priessnitz uses), has a very powerful effect in constringing the opening capillaries of the mucous membrane of the stomach, and alimentary canal generally, and in arresting the vomiting and discharges from the bowels. Each and all of these applications, if energetically persevered in, tend most powerfully to keep down the inordinate burning and thirst.

Priessnitz had not been in the habit of practicing warm water vomiting. I conversed much with him respecting all his modes of using water, during a stay of nearly two months at Graefenberg, last winter. To seek vomiting as an effect, seemed never to have been an object with him. Even by drinking cold water, vomiting sometimes comes on, but not often. If we wish to cause that symptom, as in cramps and distress arising from

offending matters in the stomach or alimentary canal, blood-warm water is by far the most speedy and effectual in its action. In reference to this mode, Priessnitz remarked, that he would do no violence to the system. I told him I had practiced it in many instances, in cases of old and very feeble persons, and that the result was always apparently good. On reflection, he admitted that the remedy must be a good one. I will here remark, that if there is heat and thirst, the water should always be used cold, although the blood-warm will do much good even then.

Here let it be understood, I do not claim a great deal for Priessnitz's experience in cholera. He is a most candid man, and one that would not, for his right hand, mislead the world in so important a matter as treating the sick. He never fails to tell us that his cholera cases were taken in the very beginning of the disease. At the same time, however, he affirms that the water-treatment is incomparably the best mode that can be adopted, in all stages of the disease.

Dr. Caspar, of Berlin, is said to have treated cholera with eminent success by means of water.

The Persian treatment of cholera, as given by Dr. Scouttetten, in some respects resembles that of Priessnitz. It is thus given:

"The following will give an idea of the mode of treatment at Baku, which contains 12,000 Persians and 800 Russians. The treatment commenced at the moment of the attack; from the first symptoms the patients were undressed, even in the streets, and then cold affusions were applied. The extremities, the trunk, and particularly the chest and the shoulders, were rubbed and shampooed, and the contracted limbs were extended.

"These manipulations were performed for two or three hours by a dozen persons, on the same individual, while the affusion of cold water was continued. Having come home he went to bed, and a warm tea was given him to produce perspiration; if this appeared, the patient was regarded as out of danger. A strict regimen was however enjoined for nine days; only light soups of rice and of tender meats were allowed, and he was recommended to take moderate exercise in the open air daily. Arrangements were made by the authorities so well, that vessels of water were placed at the corners of streets, and even on the roads; no one passed the night alone; when a person was attacked with the cholera in the street, all the by-standers attended to him; every one ran to him with vessels of water in their hands, and when one was tired of rubbing another took his place. If a person was taken sick at his house, assistance was asked and immediately obtained."

Singular enough, we are not told what were the results of this treatment. We may judge they were good, else so much pains would not have been taken. There was to say the least, system in the treatment, which is more than can be said of the old empirical modes. All who are acquainted with the water-cure of Priessnitz will see at once that the cold affusions often repeated, in connection with the friction and shampooing of the surface, would have a very powerful effect in bringing the blood toward that part, in relieving the spasms, preventing the internal heat and distress, arresting the vomiting and discharges, supporting the strength; in short, in warding off every symptom of the disease. The nine days' strict regimen, also, was most excellent, although soups, especially of flesh meat, are not the best in such cases. As

to the warm drink, that is a small matter, even if not the best. One thing is certain, the Persian patients could not have longed much for cold water and fresh air while being subjected to so vigorous an out-door treatment with cold water.

To close, then, on the treatment and genuine management in cholera: Remember, first, that prevention is immeasurably better than cure. Second, in the preliminary disturbance of the stomach and bowels, fasting with water-drinking (the water pure and soft, as filtered rain water, which all can have if no other can be obtained), and properly timed bathing, are the best possible means. Fasting until the stomach disturbance and diarrhea cease, may weaken you a little at the time, but on taking food cautiously, gradually, you soon become well and strong—even better and stronger than before. In the real attack of cholera, drink cold water to the full extent of your desire from the very first. But the water, to do its best work, remember, must be *pure and soft.* Use the rubbing wet-sheet, cold, energetically and perseveringly, in quelling spasms and promoting general circulation, until the desired effect is obtained. Practice frequent hip-baths and injections, and apply the wet girdle to check diarrhea, and to support the strength. Thus you have in cold water the most abundant of all remedial substances, the greatest and the best; the best as a tonic, stimulant, sedative, anodyne antispasmodic, accordingly as it is used; the best in nature to aid the system, not only in the most terrible emergencies of cholera, but the best to fortify and invigorate the general health.

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